

Toxic Organic Management Plan



SAF-Holland, Inc.
North Plant
801 South Main Street
Dumas, Arkansas

ARP00001061

PREPARED BY:



13000 Cantrell Road
Little Rock, Arkansas 72223
Telephone: (501) 975-8100

Page Blank Intentionally

TOXIC ORGANIC MANAGEMENT PLAN

For



SAF-HOLLAND NORTH PLANT, INC.

North Plant

801 South Main Street

Dumas, Arkansas

NOVEMBER 2018

PREPARED BY:

A handwritten signature in blue ink, appearing to read 'Penny L. Bray', is written over a horizontal line.

PENNY L. BRAY, REM #7776

ECCI, SENIOR PROJECT MANAGER

REVIEWED BY:

A handwritten signature in blue ink, appearing to read 'Rodney K. Breuer', is written over a horizontal line.

RODNEY K. BREUER, P.E.

ECCI, PRINCIPAL

Page Intentionally Blank

TABLE OF CONTENTS

1.0 Introduction 1

2.0 Process Description 1

 2.1 Certification 2

3.0 Inventory of Toxic Organic chemicals 3

 3.1 Sampling and Analysis of the Wastewater 3

4.0 Chemical Storage and Handling Practices..... 4

 4.1 Estimate of Approximate Quantities Discharged 4

Page Blank Intentionally

1.0 INTRODUCTION

SAF-Holland, Inc. recently began production at a new facility in Dumas, Arkansas. The new facility operates as the SAF-Holland North Plant, approximately 1.0 mile north of their existing plant. The facility is engaged in the manufacturing of vehicle trailer suspensions and is properly classified under Standard Industrial Classification Code (SIC) 3714 (Motor Vehicle Parts and Accessory).

2.0 PROCESS DESCRIPTION

The North Plant processes consists of fabrication, welding of the metal parts, a spray wash system and dip coating with associated oven drying. The metal parts are assembled via a welding process, sent to a spray wash process with a burner, an air blow off section with a burner, dip coating tank, paint booth, drying and curing ovens, and a touch-up painting.

The facility operates a three-stage wash system consisting of alkaline cleaning followed by two rinse cycles. A portion of the production will be subject to iron phosphate conversion coating and a second rinse cycle. The discharge from the wash system flows to the City of Dumas Publicly Owned Treatment Works (POTW). The discharge is subject to the Effluent Guidelines within 40 CFR 433, Subpart A (Metal Finishing). The City of Dumas does not operate an approved pretreatment program. Consequently, the Arkansas Department of Environmental Quality (ADEQ) is the control authority for ensuring that the facility is in compliance with the effluent guidelines. The requirements within 40 CFR 433.12 allow facilities to implement a Toxic Organic Management Plant (TOMP) in lieu of monitoring for Total Toxic Organics (TTO) on a semi-annual basis. The TOMP must be approved by the Control Authority (ADEQ) and the facility is required to submit a certification, with the semi-annual reports, that the TOMP is being implemented and maintained.

The document contained herein contains the TOMP for the SAF-Holland North Plant in Dumas, Arkansas. The plan is to be implemented immediately upon management approval. The initial certification is contained on the following page.

2.1 Certification

“Based on my inquiry of the person or persons who manage the compliance with the pretreatment standard for Total Toxic Organics (TTO), I certify that to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last semi-annual pretreatment report (SAR). I further certify that the facility is implementing the toxic organic management plan submitted to the control authority.”



Roy Fanning, Plant Manager

11/1/2018

Date

3.0 INVENTORY OF TOXIC ORGANIC CHEMICALS

The facility SDSs were reviewed to determine if any of the products used at the facility contain chemicals on the TTO list in 40 CFR 433.11(e). The review indicated that the facility does not have any compounds containing TTO chemicals currently onsite.

3.1 Sampling and Analysis of the Wastewater

Samples of the wastewater discharge were collected June 22, 2018. The analytical data shows all the TTO parameters below analytical detection limits. It should be noted that due to sample matrix interferences the samples had to be diluted such that the analytical detection value was greater than 0.01 mg/L (10 mg/L). However, since none of the products used at the facility contain TTO chemicals the “non-detect” value is appropriate. The laboratory data is included as Attachment 1.

4.0 CHEMICAL STORAGE AND HANDLING PRACTICES

As discussed in the previous section, the facility does not have any products onsite that contain TTO chemicals. Consequently, there is no potential for a discharge of a TTO chemical to the POTW to occur. The facility has controls in place to minimize the potential for any chemical to enter the POTW. The wash system is located within a recessed area of the facility that is surrounded by concrete walls. There are no drains to the POTW other than what exist in the restrooms and sink areas. Chemical storage takes place within designated areas where no drains exist. Secondary containment pallets are used to the extent available. Employee training emphasizes that nothing is to be washed down or dumped into the wash system drain to the city sewer or any restroom sink/drain.

New chemicals proposed for use onsite will be evaluated for TTO constituents prior to being used and the TOMP updated accordingly if needed. If the facility decides that the use of a TTO containing chemical is required onsite, the chemical will be stored and handled in areas where no drains to the city sewer exist. Secondary containment pallets and spill control materials will be used.

4.1 Estimate of Approximate Quantities Discharged

SAF-Holland does not use any chemicals with TTO constituents. As discussed previously and shown on the attached analytical data, all quantities of TTO chemicals are non-detect.

As discussed previously, the facility does not currently use or store any chemicals containing TTO constituents at the facility in a manner that could potentially result in a discharge to the POTW. In addition, implementation of the TOMP contained herein will ensure that future chemicals used onsite will be evaluated for TTO constituents and managed such that there is no potential for the chemical to be a discharged to the POTW.

ATTACHMENT 1
Analytical Data

Page Blank Intentionally



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 June 2018

Penny Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637

Project: SAF-Holland North Plant

Project Number: June 2018

SDG Number: 1806183

Enclosed are the results of analyses for samples received by the laboratory on 14-Jun-18 11:18. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

<u>Custody Seals</u>	✓
<u>Containers Correct</u>	✓
<u>COC/Labels Agree</u>	✓
<u>Received On Ice</u>	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James / Teresa Coins".

Norma James and/or Teresa Coins
Technical Director and/or QA Officer

This document is intended only for the use of the person(s) to whom it is expressly addressed. This document may contain information that is confidential and legally privileged. If you are not the intended recipient, you are notified that any disclosure, distribution, or copying of this document is strictly prohibited. If you have received this document in error, please destroy.

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

CASE NARRATIVE

Sample Delivery Group – 1806183

One OR more of the qualifiers described below may appear in this report. Qualifiers in RED apply to this SDG (Sample Delivery Group).

ANALYTICAL QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
EDL	Result was non-detect at an elevated detection limit due to one or more of the following: Sample Matrix, Sample Dilution, or Limited Sample Volume.
EX	Result exceeds DAILY MAXIMUM and/or MONTHLY AVERAGE.
EX2	The result exceeds the TCLP limit.
J	At client request, J-Values are reported. J-Values are considered "estimated" results as they are below the limit of quantitation yet above the method detection limit (MDL).
N	Insufficient sample volume received as required by the method.
T40	The ambient temperature exceeded 23 +/- 2°C during the TCLP rotation process.

CALIBRATION QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
CR	Result above highest calibration standard, but within linear calibration range.
Est3	Result at the instrument was above the concentration of the highest standard in the calibration curve.
E2-F	Second Source Verification Failure
E5	Estimated result due to Quality Control failure
E7	Internal Standard Response Failure
E11	Initial Calibration Minimum Response Factor Failure
E21	CCV Low
E-01	CCV High
E35	Low Level CCV Failure

QUALITY CONTROL QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
E20	Sample used as "parent" for the associated analytical batch.
%D3/S-01	Surrogate failed to recover within acceptance criteria (%D3/S-01).
E1	Results associated with this surrogate were qualified as "estimated" (E1).
B	Present in the Associated Blank
B1	Present in Blank, but Not In the Sample.
%D2 / E5	Laboratory Control Spike (LCS) and/or Laboratory Control Spike Duplicate (LCSD) failed to recover with acceptance criteria (%D2). Associated results were qualified as "estimated" (E5).
%D1	Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) failed acceptance criteria.
MBA	Failed criteria due the high concentration of analyte in the parent sample.
MBI	Failed criteria due an interference in the parent sample.
%D3	Quality Control Surrogate failed acceptance criteria.
NREC	Quality Control Surrogate failed.

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

ANALYTICAL RESULTS

Lab Number: 1806183-01
Sample Name: System Discharge Grab
Date/Time Collected: 6/14/18 8:41
Sample Matrix: Water

<u>Volatiles</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
1,1,1-Trichloroethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
1,1,2,2-Tetrachloroethane	ug/L	< 20.0	E20, EDL	6/18/18 12:19	B806279	EPA 624
1,1,2-Trichloroethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
1,1-Dichloroethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
1,1-Dichloroethene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
1,2-Dichloroethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
1,2-Dichloropropane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
2-Chloroethyl vinyl ether	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Acrolein	ug/L	< 50.0		6/18/18 12:19	B806279	EPA 624
Acrylonitrile	ug/L	< 20.0		6/18/18 12:19	B806279	EPA 624
Benzene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Bromodichloromethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Bromoform	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Bromomethane	ug/L	< 50.0		6/18/18 12:19	B806279	EPA 624
Carbon tetrachloride	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Chlorobenzene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Chlorodibromomethane	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Chloroethane	ug/L	< 50.0		6/18/18 12:19	B806279	EPA 624
Chloroform	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Chloromethane	ug/L	< 50.0		6/18/18 12:19	B806279	EPA 624
cis-1,3-Dichloropropene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Ethylbenzene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Methylene chloride	ug/L	< 20.0		6/18/18 12:19	B806279	EPA 624
Tetrachloroethene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Toluene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
trans-1,2-Dichloroethene	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
Trichloroethene	ug/L	< 20.0	E20, EDL	6/18/18 12:19	B806279	EPA 624
Vinyl chloride	ug/L	< 20.0	EDL	6/18/18 12:19	B806279	EPA 624
4-Bromofluorobenzene [surr]	%	94.4		6/18/18 12:19	B806279	EPA 624
1,2-Dichloroethane-d4 [surr]	%	105		6/18/18 12:19	B806279	EPA 624
Toluene-d8 [surr]	%	90.7		6/18/18 12:19	B806279	EPA 624

<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Cyanide (total)	mg/L	< 0.010		6/18/18 15:52	B806270	SM 4500-CN B,E-2011

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

ANALYTICAL RESULTS

Lab Number: 1806183-02
Sample Name: System Discharge Composite
Date/Time Collected: 6/14/18 0:00
Sample Matrix: Water

<u>Acid Compounds</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
2,4,6-Trichlorophenol	ug/L	< 100	E1, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,4-Dichlorophenol	ug/L	< 100	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,4-Dimethylphenol	ug/L	< 100	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,4-Dinitrophenol	ug/L	< 500	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2-Chlorophenol	ug/L	< 100	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2-Nitrophenol	ug/L	< 200	E1, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
4,6-Dinitro-o-cresol	ug/L	< 500	E1, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
4-Nitrophenol	ug/L	< 500	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
p-Chloro-m-cresol	ug/L	< 100	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Pentachlorophenol	ug/L	< 50.0	E1, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Phenol	ug/L	< 100	E1, E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,4,6-Tribromophenol [surr]	%	7.69	%D3	6/20/18 0:10	B806301	EPA 625 (mod.)
2-Fluorophenol [surr]	%	0.111	%D3	6/20/18 0:10	B806301	EPA 625 (mod.)
Phenol-d5 [surr]	%	0.137	%D3	6/20/18 0:10	B806301	EPA 625 (mod.)
<u>Base/Neutral Compounds</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
1,2,4-Trichlorobenzene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
1,2-Dichlorobenzene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
1,2-Diphenyl Hydrazine	ug/L	< 200	E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
1,3-Dichlorobenzene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
1,4-Dichlorobenzene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,3,7,8-TCDD Screen	ug/L	< 5.00	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,2'-Oxybis(1-Chloropropane)	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,4-Dinitrotoluene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2,6-Dinitrotoluene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2-Chloronaphthalene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
3,3'-Dichlorobenzidine	ug/L	< 50.0	E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
4-Bromophenyl-phenylether	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
4-Chlorophenyl-phenylether	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Acenaphthene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Acenaphthylene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Anthracene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzidine	ug/L	< 500	E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzo[a]pyrene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzo[b]fluoranthene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzo[g,h,i]perylene	ug/L	< 200	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzo[k]fluoranthene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Benzo (a) anthracene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Bis(2-chloroethoxy)methane	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Bis(2-chloroethyl)ether	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Bis(2-ethylhexyl)phthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Butylbenzylphthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Chrysene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Dibenz[a,h]anthracene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

ANALYTICAL RESULTS

Lab Number: 1806183-02
Sample Name: System Discharge Composite
Date/Time Collected: 6/14/18 0:00
Sample Matrix: Water

<u>Base/Neutral Compounds</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Diethylphthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Dimethylphthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Di-n-butylphthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Di-n-octylphthalate	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Fluoranthene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Fluorene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Hexachlorobenzene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Hexachlorobutadiene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Hexachlorocyclopentadiene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Hexachloroethane	ug/L	< 200	E5, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Indeno[1,2,3-cd]pyrene	ug/L	< 50.0	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Isophorone	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Naphthalene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Nitrobenzene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
N-Nitrosodimethylamine	ug/L	< 500	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
N-Nitroso-di-n-propylamine	ug/L	< 200	E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
N-Nitrosodiphenylamine/diphenylamine	ug/L	< 200	E20, EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Phenanthrene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
Pyrene	ug/L	< 100	EDL	6/20/18 0:10	B806301	EPA 625 (mod.)
2-Fluorobiphenyl [surr]	%	69.7		6/20/18 0:10	B806301	EPA 625 (mod.)
Nitrobenzene-d5 [surr]	%	55.8		6/20/18 0:10	B806301	EPA 625 (mod.)
Terphenyl-d14 [surr]	%	78.1		6/20/18 0:10	B806301	EPA 625 (mod.)
<u>Pesticides/PCBs</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Aldrin	ug/L	< 0.100	EDL	6/19/18 19:34	B806278	EPA 608
alpha-BHC	ug/L	< 0.500	EDL	6/19/18 19:34	B806278	EPA 608
beta-BHC	ug/L	< 0.500	EDL	6/19/18 19:34	B806278	EPA 608
gamma-BHC (Lindane)	ug/L	< 0.500	EDL	6/19/18 19:34	B806278	EPA 608
delta-BHC	ug/L	< 0.500	EDL	6/19/18 19:34	B806278	EPA 608
Chlordane	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
4,4'-DDT	ug/L	< 0.200	E20, EDL	6/19/18 19:34	B806278	EPA 608
4,4'-DDE	ug/L	< 1.00	EDL	6/19/18 19:34	B806278	EPA 608
4,4'-DDD	ug/L	< 1.00	EDL	6/19/18 19:34	B806278	EPA 608
Dieldrin	ug/L	< 0.200	EDL	6/19/18 19:34	B806278	EPA 608
Endosulfan I	ug/L	< 0.100	EDL	6/19/18 19:34	B806278	EPA 608
Endosulfan II	ug/L	< 0.200	EDL	6/19/18 19:34	B806278	EPA 608
Endosulfan sulfate	ug/L	< 1.00	E-01, EDL	6/19/18 19:34	B806278	EPA 608
Endrin	ug/L	< 0.200	E-01, EDL	6/19/18 19:34	B806278	EPA 608
Endrin aldehyde	ug/L	< 1.00	EDL	6/19/18 19:34	B806278	EPA 608
Heptachlor	ug/L	< 0.100	EDL	6/19/18 19:34	B806278	EPA 608
Heptachlor epoxide	ug/L	< 0.100	EDL	6/19/18 19:34	B806278	EPA 608
Chlorpyrifos	ug/L	< 0.700	E-01, EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1242	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1254	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

ANALYTICAL RESULTS

Lab Number: 1806183-02
Sample Name: System Discharge Composite
Date/Time Collected: 6/14/18 0:00
Sample Matrix: Water

<u>Pesticides/PCBs</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Aroclor-1221	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1232	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1248	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1260	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Aroclor-1016	ug/L	< 2.00	EDL	6/19/18 19:34	B806278	EPA 608
Toxaphene	ug/L	< 3.00	EDL	6/19/18 19:34	B806278	EPA 608
TCMX [surr]	%	139		6/19/18 19:34	B806278	EPA 608
DCBP [surr]	%	105		6/19/18 19:34	B806278	EPA 608

<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Cadmium	mg/L	< 0.00120		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Chromium	mg/L	0.0259		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Copper	mg/L	0.266		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Nickel	mg/L	0.0152		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Silver	mg/L	< 0.0208		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)
Zinc	mg/L	0.504		6/20/18 17:33	B806327	EPA 200.7, Rev 4.4 (1994)

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

QUALITY CONTROL RESULTS
Wet Chemistry -- Batch: B806270 (Water)

Prepared: 18-Jun-18 08:42 By: EP -- Analyzed: 18-Jun-18 15:52 By: EP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Cyanide (total)	<0.010 mg/L	116% / 110%	108% / NA		5.33%	

Pesticides/PCBs -- Batch: B806278 (Water)

Prepared: 18-Jun-18 11:23 By: TA -- Analyzed: 19-Jun-18 13:25 By: tb

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
4,4'-DDD	<0.100 ug/L	105% / NA	20.0% / 15.6%		23.4%	
4,4'-DDE	<0.100 ug/L	65.9% / NA	14.8% / 13.7%		6.00%	
4,4'-DDT	<0.020 ug/L	107% / NA	4.80% / 4.15%		%	%D1
Aldrin	<0.010 ug/L	54.9% / NA	40.6% / 29.5%		30.0%	D
alpha-BHC	<0.050 ug/L	59.8% / NA	50.7% / 50.0%		0.101%	
beta-BHC	<0.050 ug/L	57.0% / NA	52.1% / 57.3%		11.1%	
delta-BHC	<0.050 ug/L	71.4% / NA	30.7% / 26.6%		5.98%	
Dieldrin	<0.020 ug/L	99.6% / NA	23.2% / 15.1%		21.2%	D
Endosulfan I	<0.010 ug/L	57.5% / NA	30.0% / 24.1%		20.3%	D
Endosulfan II	<0.020 ug/L	102% / NA	22.0% / 16.5%		27.1%	D
Endosulfan sulfate	<0.100 ug/L	108% / NA	19.8% / 19.8%		1.91%	
Endrin	<0.020 ug/L	97.1% / NA	24.6% / 21.4%		12.6%	D
Endrin aldehyde	<0.100 ug/L	115% / NA	12.2% / 13.7%		12.7%	
gamma-BHC (Lindane)	<0.050 ug/L	59.0% / NA	38.3% / 36.9%		1.55%	
Heptachlor	<0.010 ug/L	56.9% / NA	32.9% / 27.9%		14.9%	
Heptachlor epoxide	<0.010 ug/L	60.7% / NA	28.9% / 25.3%		11.6%	
DCBP [surr]	93.2 %	84.5% / NA	8.38% / 21.3%		NA	
TCMX [surr]	32.0 %	28.8% / NA	57.1% / 54.8%		NA	

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

QUALITY CONTROL RESULTS
Volatiles -- Batch: B806279 (Water)

Prepared: 18-Jun-18 09:17 By: CT -- Analyzed: 18-Jun-18 17:30 By: ct

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
1,1,1-Trichloroethane	<10.0 ug/L	101% / NA	113% / 110%		3.03%	
1,1,2,2-Tetrachloroethane	<10.0 ug/L	95.1% / NA	10.5% / 6.03%		54.5%	D, %D1
1,1,2-Trichloroethane	<10.0 ug/L	98.8% / NA	103% / 95.8%		7.35%	
1,1-Dichloroethane	<10.0 ug/L	99.0% / NA	115% / 113%		2.01%	
1,1-Dichloroethene	<10.0 ug/L	96.9% / NA	110% / 112%		1.73%	
1,2-Dichloroethane	<10.0 ug/L	107% / NA	113% / 112%		1.04%	
1,2-Dichloropropane	<10.0 ug/L	103% / NA	121% / 110%		9.14%	
2-Chloroethyl vinyl ether	<10.0 ug/L	98.3% / NA	123% / 115%		6.67%	
Acrolein	<50.0 ug/L	77.6% / NA	45.9% / 34.5%		28.3%	
Acrylonitrile	<20.0 ug/L	107% / NA	105% / 104%		1.26%	
Benzene	<10.0 ug/L	103% / NA	124% / 116%		6.40%	
Bromodichloromethane	<10.0 ug/L	101% / NA	121% / 107%		11.8%	
Bromoform	<10.0 ug/L	91.9% / NA	105% / 95.9%		9.27%	
Bromomethane	<50.0 ug/L	92.9% / NA	98.9% / 93.6%		5.47%	
Carbon tetrachloride	<2.00 ug/L	94.7% / NA	106% / 109%		2.49%	
Chlorobenzene	<10.0 ug/L	85.5% / NA	99.2% / 93.4%		6.06%	
Chlorodibromomethane	<10.0 ug/L	91.6% / NA	102% / 106%		3.58%	
Chloroethane	<50.0 ug/L	83.3% / NA	115% / 102%		11.9%	
Chloroform	<10.0 ug/L	106% / NA	125% / 114%		9.01%	
Chloromethane	<50.0 ug/L	78.1% / NA	102% / 97.2%		5.31%	
cis-1,3-Dichloropropene	<10.0 ug/L	111% / NA	124% / 111%		11.2%	
Ethylbenzene	<10.0 ug/L	88.8% / NA	101% / 98.5%		2.37%	
Methylene chloride	<20.0 ug/L	104% / NA	109% / 116%		5.73%	
Tetrachloroethene	<10.0 ug/L	85.1% / NA	98.3% / 94.5%		3.97%	
Toluene	<10.0 ug/L	86.4% / NA	95.5% / 96.5%		1.08%	
trans-1,2-Dichloroethene	<10.0 ug/L	104% / NA	119% / 118%		0.181%	
Trichloroethene	<10.0 ug/L	92.2% / NA	203% / 186%		9.04%	%D1
Vinyl chloride	<10.0 ug/L	89.2% / NA	110% / 110%		0.186%	
1,2-Dichloroethane-d4 [surr]	97.2 %	106% / NA	100% / 104%		NA	
4-Bromofluorobenzene [surr]	103 %	102% / NA	99.3% / 98.2%		NA	
Toluene-d8 [surr]	94.4 %	93.3% / NA	88.1% / 94.9%		NA	

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

QUALITY CONTROL RESULTS
Base/Neutral Compounds -- Batch: B806301 (Water)
Prepared: 19-Jun-18 11:12 By: CT -- Analyzed: 19-Jun-18 23:47 By: KR

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
1,2,4-Trichlorobenzene	<10.0 ug/L	44.6% / NA	27.7% / 25.1%		10.7%	
1,2-Dichlorobenzene	<10.0 ug/L	43.8% / NA	72.5% / 63.3%		14.4%	
1,2-Diphenyl Hydrazine	<20.0 ug/L	82.7% / NA	No Rec / No Rec		NA	NREC
1,3-Dichlorobenzene	<10.0 ug/L	41.1% / NA	37.9% / 32.6%		16.0%	
1,4-Dichlorobenzene	<10.0 ug/L	42.1% / NA	39.9% / 33.7%		17.7%	
2,2'-Oxybis(1-Chloropropane)	<10.0 ug/L	62.9% / NA	49.9% / 44.0%		13.5%	
2,3,7,8-TCDD Screen	<10.0 ug/L	NA / NA	NA / NA		NA	
2,4,6-Trichlorophenol	<10.0 ug/L	83.2% / NA	76.0% / 72.8%		5.31%	
2,4-Dichlorophenol	<10.0 ug/L	72.4% / NA	No Rec / No Rec		NA	NREC
2,4-Dimethylphenol	<10.0 ug/L	73.0% / NA	No Rec / 6.68%		%	
2,4-Dinitrophenol	<50.0 ug/L	90.2% / NA	No Rec / No Rec		NA	NREC
2,4-Dinitrotoluene	<10.0 ug/L	90.8% / NA	74.2% / 71.9%		3.80%	
2,6-Dinitrotoluene	<10.0 ug/L	90.3% / NA	84.2% / 77.7%		8.99%	
2-Chloronaphthalene	<10.0 ug/L	61.2% / NA	70.7% / 68.5%		4.15%	
2-Chlorophenol	<10.0 ug/L	68.7% / NA	10.3% / 10.8%		4.03%	%D1
2-Nitrophenol	<20.0 ug/L	76.0% / NA	85.0% / 74.9%		4.96%	
3,3'-Dichlorobenzidine	<5.00 ug/L	91.8% / NA	No Rec / No Rec		NA	NREC
4,6-Dinitro-o-cresol	<50.0 ug/L	87.5% / NA	59.2% / 55.0%		6.32%	
4-Bromophenyl-phenylether	<10.0 ug/L	78.1% / NA	80.6% / 75.8%		7.08%	
4-Chlorophenyl-phenylether	<10.0 ug/L	73.6% / NA	78.3% / 73.9%		6.80%	
4-Nitrophenol	<50.0 ug/L	67.9% / NA	363% / 352%		4.01%	%D1
Acenaphthene	<10.0 ug/L	67.4% / NA	73.8% / 71.9%		3.59%	
Acenaphthylene	<10.0 ug/L	69.0% / NA	34.1% / 32.1%		6.90%	
Anthracene	<10.0 ug/L	80.9% / NA	76.5% / 73.1%		5.55%	
Benzidine	<50.0 ug/L	28.8% / NA	No Rec / No Rec		NA	NREC
Benzo (a) anthracene	<5.00 ug/L	83.3% / NA	78.5% / 74.0%		6.93%	
Benzo[a]pyrene	<5.00 ug/L	86.8% / NA	82.8% / 74.8%		11.1%	
Benzo[b]fluoranthene	<10.0 ug/L	87.2% / NA	84.7% / 80.0%		6.71%	
Benzo[g,h,i]perylene	<20.0 ug/L	81.6% / NA	83.7% / 77.4%		8.83%	
Benzo[k]fluoranthene	<5.00 ug/L	86.0% / NA	82.7% / 75.7%		9.87%	
Bis(2-chloroethoxy)methane	<10.0 ug/L	72.4% / NA	61.6% / 62.5%		0.436%	
Bis(2-chloroethyl)ether	<10.0 ug/L	65.5% / NA	50.7% / 44.2%		14.7%	
Bis(2-ethylhexyl)phthalate	<10.0 ug/L	90.2% / NA	86.7% / 80.5%		5.62%	
Butylbenzylphthalate	<10.0 ug/L	89.1% / NA	87.3% / 79.5%		10.4%	
Chrysene	<5.00 ug/L	82.7% / NA	79.1% / 74.0%		7.64%	
Dibenz[a,h]anthracene	<5.00 ug/L	87.6% / NA	89.4% / 83.2%		8.20%	
Diethylphthalate	<10.0 ug/L	86.1% / NA	84.3% / 80.1%		6.10%	
Dimethylphthalate	<10.0 ug/L	86.3% / NA	83.6% / 77.6%		8.43%	
Di-n-butylphthalate	<10.0 ug/L	87.6% / NA	86.6% / 82.6%		5.71%	
Di-n-octylphthalate	<10.0 ug/L	89.3% / NA	84.2% / 79.1%		7.02%	
Fluoranthene	<10.0 ug/L	80.7% / NA	82.4% / 79.2%		4.97%	
Fluorene	<10.0 ug/L	76.6% / NA	76.9% / 71.6%		8.17%	
Hexachlorobenzene	<5.00 ug/L	80.9% / NA	82.0% / 77.0%		7.36%	
Hexachlorobutadiene	<10.0 ug/L	39.3% / NA	47.5% / 44.0%		8.65%	
Hexachlorocyclopentadiene	<10.0 ug/L	41.5% / NA	32.4% / 22.1%		31.4%	D
Hexachloroethane	<20.0 ug/L	38.0% / NA	35.8% / 30.6%		16.6%	%D2, E5
Indeno[1,2,3-cd]pyrene	<5.00 ug/L	86.0% / NA	84.8% / 80.6%		6.03%	
Isophorone	<10.0 ug/L	72.5% / NA	56.8% / 52.5%		8.76%	

Pennye Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

QUALITY CONTROL RESULTS
Base/Neutral Compounds -- Batch: B806301 (Water)
Prepared: 19-Jun-18 11:12 By: CT -- Analyzed: 19-Jun-18 23:47 By: KR

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Naphthalene	<10.0 ug/L	51.5% / NA	56.9% / 52.3%		9.29%	
Nitrobenzene	<10.0 ug/L	71.2% / NA	117% / 85.8%		30.0%	D
N-Nitrosodimethylamine	<50.0 ug/L	38.4% / NA	26.0% / 23.0%		13.0%	
N-Nitroso-di-n-propylamine	<20.0 ug/L	71.7% / NA	64.6% / 55.9%		15.4%	
N-Nitrosodiphenylamine/diphenylamine	<20.0 ug/L	80.6% / NA	No Rec / No Rec		NA	NREC
p-Chloro-m-cresol	<10.0 ug/L	79.6% / NA	No Rec / No Rec		NA	NREC
Pentachlorophenol	<5.00 ug/L	95.9% / NA	83.2% / 75.9%		8.07%	
Phenanthrene	<10.0 ug/L	81.7% / NA	80.7% / 76.4%		6.43%	
Phenol	<10.0 ug/L	43.9% / NA	16.0% / 18.0%		5.25%	%D1
Pyrene	<10.0 ug/L	83.6% / NA	81.8% / 77.7%		6.15%	
2,4,6-Tribromophenol [surr]	76.4 %	85.5% / NA	22.1% / 20.6%		NA	%D3
2-Fluorobiphenyl [surr]	59.0 %	72.6% / NA	70.5% / 67.6%		NA	
2-Fluorophenol [surr]	41.7 %	49.8% / NA	1.75% / 1.89%		NA	%D3
Nitrobenzene-d5 [surr]	63.6 %	75.1% / NA	60.6% / 53.9%		NA	
Phenol-d5 [surr]	31.6 %	42.6% / NA	2.56% / 3.76%		NA	%D3
Terphenyl-d14 [surr]	73.4 %	78.7% / NA	79.3% / 77.7%		NA	

Total Metals -- Batch: B806327 (Water)
Prepared: 20-Jun-18 15:10 By: HF -- Analyzed: 20-Jun-18 17:29 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Cadmium	<0.00120 mg/L	103% / NA	110% / 107%		3.40%	
Chromium	<0.0125 mg/L	105% / NA	106% / 102%		3.60%	
Copper	<0.00520 mg/L	103% / NA	95.6% / 91.6%		2.72%	
Lead	<0.0156 mg/L	104% / NA	97.9% / 94.7%		3.25%	
Nickel	<0.0104 mg/L	104% / NA	105% / 101%		3.42%	
Silver	<0.0208 mg/L	105% / NA	103% / 98.6%		4.51%	
Zinc	<0.0156 mg/L	96.4% / NA	112% / 103%		4.36%	

QUALIFIER(S)

- *%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- *%D2: Laboratory Control Spike and/or Laboratory Control Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- *%D3: Surrogate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- *D: RPD Value Does Not Meet Laboratory Acceptance Criteria
- *E-01: Estimated Result; This Analyte Failed "High" in the CCV; If the sample is non-detect for this analyte, the CCV demonstrated the analyte would have been detected were it present.
- *E1: Estimated Result Due to Surrogate Failure
- *E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.
- *E5: Estimated Result Due to Quality Control Failure
- *EDL: Elevated Detection Limit Due to one or more of the following: Sample Matrix, Sample Dilution, or Limited Sample Volume
- *NREC: No Recovery

22 June 2018



Penny Bray
Engineering, Compliance, & Construction, Inc.
13000 Cantrell Rd.
Little Rock, AR 72223-1637
Project: SAF-Holland North Plant
Project Number: June 2018
Date Received: 14-Jun-18 11:18

All Analysis performed according to EPA approved methodology when available :
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James / Teresa Coins
Norma James and/or Teresa Coins
Technical Director and/or QA Officer

ATTACHMENT 2

SDSs

Page Blank Intentionally



SAFETY DATA SHEET

Revision date 21-Jul-2017

Version 14

Supersedes Date: 06-Jun-2017

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code WLA2131

Product Name BLACK ARMOUR DIP PRIMER

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Paint, Coatings

Details of the supplier of the safety data sheet

See section 16 for more information

The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

E-mail address msds@valspar.com

Emergency telephone number

United States of America 1-888-345-5732

American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands 1-800-255-3924

Section 2: HAZARDS IDENTIFICATION

Classification

Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Label elements



Signal word

DANGER

HAZARD STATEMENTS

May cause cancer

May cause damage to the following organs through prolonged or repeated exposure: Lung

PREVENTION

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

RESPONSE

IF exposed or concerned: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

STORAGE

Store locked up.

DISPOSAL

Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)

No information available.

OTHER HAZARDS

Not applicable.

UNKNOWN ACUTE TOXICITY

.0001% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Silica, cristobalite	14464-46-1	3 - 5
2-Butoxyethanol	111-76-2	1 - 3
Carbon black	1333-86-4	1 - 3
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl-	126-86-3	0.1 - 0.3
Quartz	14808-60-7	0.1 - 0.3

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice

IF exposed or concerned: Get medical advice/attention.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical

Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials

Strong oxidizing agents. Alkali.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, cristobalite 14464-46-1	TWA: 0.025 mg/m ³ respirable fraction	TWA: $(1/2)(30)/(\%SiO_2 + 2)$ mg/m ³ TWA total dust TWA: $(1/2)(250)/(\%SiO_2 + 5)$ mppcf TWA respirable fraction TWA: $(1/2)(10)/(\%SiO_2 + 2)$ mg/m ³ TWA respirable fraction	IDLH: 25 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Carbon black 1333-86-4	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable fraction	TWA: $(30)/(\%SiO_2 + 2)$ mg/m ³ TWA total dust TWA: $(250)/(\%SiO_2 + 5)$ mppcf TWA respirable fraction TWA: $(10)/(\%SiO_2 + 2)$ mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing.

Hand Protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Protection

No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
--

Information on basic physical and chemical properties

Physical state	liquid
Appearance	No information available
Odor	Water
Color	black
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	96 °C / 205 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	11.58
specific gravity	1.39
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information

Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Alkali.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Hydrogen chloride. Ammonia. Chlorine.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Not applicable

Skin Contact

Not applicable

Ingestion

Not applicable

Inhalation

Not applicable

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Silica, cristobalite 14464-46-1	-	-	-
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl- 126-86-3	-	-	-
Quartz 14808-60-7	= 500 mg/kg (Rat)	-	-

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	24044 Mg/kg
ATEmix (dermal)	52897 Mg/kg
ATEmix (inhalation-dust/mist)	72.1 mg/l
ATEmix (inhalation-vapor)	529 mg/l

UNKNOWN ACUTE TOXICITY .0001% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

According to IARC, Volume 93, no significant exposure to primary particles of carbon black is thought to occur from use in paints since the pigment is bound to other materials.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, cristobalite 14464-46-1	A2	Group 1	Known	X
2-Butoxyethanol 111-76-2	A3			
Carbon black 1333-86-4	A3	Group 2B		X
Quartz 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen. A3 - Animal Carcinogen.

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans. Group 2B - Possibly Carcinogenic to Humans.

NTP (National Toxicology Program)

Known - Known Carcinogen.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present.

Skin corrosion/irritation Not applicable

Serious eye damage/eye irritation Not applicable

Skin sensitization Not applicable

Respiratory sensitization Not applicable

Germ cell mutagenicity Not applicable
Carcinogenicity May cause cancer
Reproductive Toxicity Not applicable
Specific target organ toxicity (single exposure) Not applicable
Specific target organ toxicity (repeated exposure)
 May cause damage to the following organs through prolonged or repeated exposure: Lung
Aspiration hazard Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity
 Environmental precautions Prevent product from entering drains.

Persistence and degradability
 No information available

Bioaccumulation
 No information available

Mobility
 No information available

Other adverse effects No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal. Empty containers must be scrapped or reconditioned.

Section 14: TRANSPORT INFORMATION

	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
14.1 UN/ID no	Not regulated	Not regulated	Not regulated
14.2 Proper shipping name			

14.3 Hazard Class

14.4 Packing Group

14.5 Environmental hazard Not applicable

14.6 Special Provisions

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

The supplier may apply one of the following exceptions: Combustible Liquid (49 CFR 173.150(f)); Consumer Commodity (49 CFR 173.150(c), ICAO/IATA SP A112); Limited Quantity (49 CFR 173.150(b), ICAO Part 3 Chapter 4, IATA 2.7, IMDG Chapter 3.4); Viscous Liquid (49 CFR 173.121(b), IMDG 2.3.2.2, IATA 3.3.3.1.1, ICAO 3.2.2, ADR 2.2.3.1.5); Does Not Sustain Combustion (49 CFR 173.120(a), IATA 3.3.1.3, ICAO 3.1.3, IMDG 2.3.1.3, ADR 2.2.3.1.1 Note 1); or others as allowed under hazardous materials/dangerous goods regulations.

Section 15: REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory All components are listed or exempt from listing.

DSL - Canadian Domestic Substances List All components are listed or exempt from listing

US Federal Regulations

Chemical Name	SARA 313 - Threshold Values %	Metals	Hazardous air pollutants (HAPs) content
2-Butoxyethanol 111-76-2 1 - 3	1		
Zinc oxide 1314-13-2 1 - 3	1	Zinc	

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

US State Regulations

Rule 66 status of product

Not photochemically reactive.

California Proposition 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

U.S. EPA Label information

EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Water 7732-18-5
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Proprietary Inert
Silica, cristobalite 14464-46-1
2-Butoxyethanol 111-76-2
Carbon black 1333-86-4
Zinc oxide 1314-13-2
Quartz 14808-60-7

Section 16: OTHER INFORMATION

HMIS

Health hazards 2*

* = Chronic Health Hazard

Flammability 1

Physical hazards 0

Personal Protection X

Supplier Address

Valspar Coatings
5400 Avenue Of The Cities
Moline, IL 61265
309-762-7546

Prepared By Product Stewardship

Revision date 21-Jul-2017

Revision Note No information available

Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

End of Safety Data Sheet



SAFETY DATA SHEET

Revision date 26-May-2016

Version 10

Supersedes Date: 25-Apr-2016

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code WLA2131

Product Name BLACK ARMOUR DIP PRIMER

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Paint, Coatings

Details of the supplier of the safety data sheet

See section 16 for more information

The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

E-mail address msds@valspar.com

Emergency telephone number

United States of America 1-888-345-5732

American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands 1-800-255-3924

Section 2: HAZARDS IDENTIFICATION

Classification

Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Label elements



Signal word

DANGER

HAZARD STATEMENTS

May cause cancer

May cause damage to organs through prolonged or repeated exposure

PREVENTION

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

RESPONSE

IF exposed or concerned: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

STORAGE

Store locked up.

DISPOSAL

Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)

Not applicable.

OTHER HAZARDS

Not applicable.

UNKNOWN ACUTE TOXICITY

.0001% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Silica, cristobalite	14464-46-1	3 - 5
2-Butoxyethanol	111-76-2	1 - 3
Carbon black	1333-86-4	1 - 3
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl-	126-86-3	0.1 - 0.3
Quartz	14808-60-7	0.1 - 0.3

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice

IF exposed or concerned: Get medical advice/attention.

Product Code WLA2131

Page 2 / 9

AGHS - USA OSHA SDS

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical

Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials

Strong oxidizing agents. Alkali.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, cristobalite 14464-46-1	TWA: 0.025 mg/m ³ respirable fraction	TWA: (1/2)(30)/(100SiO ₂ + 2) mg/m ³ TWA total dust TWA: (1/2)(250)/(100SiO ₂ + 5) mppcf TWA respirable fraction TWA: (1/2)(10)/(100SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 25 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Carbon black 1333-86-4	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable fraction	TWA: (30)/(100SiO ₂ + 2) mg/m ³ TWA total dust TWA: (250)/(100SiO ₂ + 5) mppcf TWA respirable fraction TWA: (10)/(100SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing.

Hand Protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Protection

No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

Physical state	liquid
Appearance	No information available
Odor	Water
Color	black
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	96 °C / 205 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	11.58
specific gravity	1.39
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information
Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Alkali.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Hydrogen chloride. Ammonia. Chlorine.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Not applicable

Skin Contact

Not applicable

Ingestion

Not applicable

Inhalation

Not applicable

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Silica, cristobalite 14464-46-1	-	-	-
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl- 126-86-3	-	-	-
Quartz 14808-60-7	= 500 mg/kg (Rat)	-	-

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 24044 Mg/kg

ATEmix (dermal) 52897 Mg/kg

ATEmix (inhalation-dust/mist) 72.1 mg/l

ATEmix (inhalation-vapor) 529 mg/l

UNKNOWN ACUTE TOXICITY .0001% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

According to IARC, Volume 93, no significant exposure to primary particles of carbon black is thought to occur from use in paints since the pigment is bound to other materials.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, cristobalite 14464-46-1	A2	Group 1	Known	X
2-Butoxyethanol 111-76-2	A3			
Carbon black 1333-86-4	A3	Group 2B		X
Quartz 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen. A3 - Animal Carcinogen.

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans. Group 2B - Possibly Carcinogenic to Humans.

NTP (National Toxicology Program)

Known - Known Carcinogen.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present.

Skin corrosion/irritation Not applicable

Serious eye damage/eye irritation Not applicable

Skin sensitization Not applicable

Respiratory sensitization Not applicable

Germ cell mutagenicity Not applicable

Product Code WLA2131

Page 6 / 9

AGHS - USA OSHA SDS

Carcinogenicity	May cause cancer
Reproductive Toxicity	Not applicable
Specific target organ toxicity (single exposure)	Not applicable
Specific target organ toxicity (repeated exposure)	May cause damage to organs through prolonged or repeated exposure
Aspiration hazard	Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity
Environmental precautions Prevent product from entering drains.

Persistence and degradability
No information available

Bioaccumulation
No information available

Mobility
No information available

Other adverse effects No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal. Empty containers must be scrapped or reconditioned.

Section 14: TRANSPORT INFORMATION

14.1 UN/ID no	DOT Not regulated	IMDG Not regulated	IATA Not regulated
14.2 Proper shipping name			
14.3 Hazard Class			
14.4 Packing Group			
14.5 Environmental hazard	Not applicable		
14.6 Special Provisions			
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available		

The supplier may apply one of the following exceptions: Combustible Liquid (49 CFR 173.150(f)); Consumer Commodity (49 CFR 173.150(c), ICAO/IATA SP A112); Limited Quantity (49 CFR 173.150(b), ICAO Part 3 Chapter 4, IATA 2.7, IMDG Chapter 3.4); Viscous Liquid (49 CFR 173.121(b), IMDG 2.3.2.2, IATA 3.3.3.1.1, ICAO 3.2.2, ADR 2.2.3.1.5); Does Not Sustain Combustion (49 CFR 173.120(a), IATA 3.3.1.3, ICAO 3.1.3, IMDG 2.3.1.3, ADR 2.2.3.1.1 Note 1); or others as allowed under hazardous materials/dangerous goods regulations.

Section 15: REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	All components are listed or exempt from listing.
DSL - Canadian Domestic Substances List	All components are listed or exempt from listing.

US Federal Regulations

Chemical Name	SARA 313 - Threshold Values %	Hazardous air pollutants (HAPs) content
---------------	-------------------------------	---

2-Butoxyethanol 111-76-2 1 - 3	1	
Zinc oxide 1314-13-2 1 - 3	1	

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

US State Regulations

Rule 66 status of product

Not photochemically reactive.

California Proposition 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

U.S. EPA Label information

EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Water 7732-18-5
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Proprietary Inert
Silica, cristobalite 14464-46-1
2-Butoxyethanol 111-76-2
Carbon black 1333-86-4
Zinc oxide 1314-13-2
Quartz 14808-60-7

Section 16: OTHER INFORMATION

HMIS

Health hazards 2*

* = Chronic Health Hazard

Flammability 1

Physical hazards 0

Personal Protection X

Supplier Address

Valspar Coatings
5400 Avenue Of The Cities
Moline, IL 61265
309-762-7546

Product Code WLA2131

Page 8 / 9

AGHS - USA OSHA SDS

Prepared By

Product Stewardship

Revision date

26-May-2016

Revision Note

No information available

Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. **UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

End of Safety Data Sheet



SAFETY DATA SHEET

Revision date 07-Aug-2017

Version 4

Supersedes Date: 19-Nov-2016

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code WEA0110A

Product Name AQUASPAR 100 WB BLACK EPOXY PRIMER

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Paint, Coatings

Details of the supplier of the safety data sheet

See section 16 for more information

The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

E-mail address msds@valspar.com

Emergency telephone number

United States of America 1-888-345-5732

American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands 1-800-255-3924

Section 2: HAZARDS IDENTIFICATION

Classification

Carcinogenicity	Category 1A
-----------------	-------------

Label elements



Signal word

DANGER

HAZARD STATEMENTS

May cause cancer

PREVENTION

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

RESPONSE

IF exposed or concerned: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

STORAGE

Store locked up.

DISPOSAL

Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)

No information available.

OTHER HAZARDS

Not applicable.

UNKNOWN ACUTE TOXICITY

0% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Ethylene glycol monopropyl ether	2807-30-9	3 - 5
Carbon black	1333-86-4	1 - 3
Quartz	14808-60-7	0.3 - 1

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice

IF exposed or concerned: Get medical advice/attention.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact

Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Ingestion

Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical

Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials

Strong oxidizing agents. Acids.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Carbon black 1333-86-4	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable fraction	TWA: (30)/(%SiO ₂ + 2) mg/m ³ TWA total dust TWA: (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction TWA: (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing.

Hand Protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Protection
No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid
Appearance	No information available
Odor	Odorless
Color	black
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	94 °C / 201 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	10.53
specific gravity	1.26
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information

Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Acids.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂).

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact	Not applicable
Skin Contact	Not applicable
Ingestion	Not applicable
Inhalation	Not applicable

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene glycol monopropyl ether 2807-30-9	= 3089 mg/kg (Rat)	= 870 mg/kg (Rabbit) = 960 µL/kg (Rabbit)	= 1530 ppm (Rat) 7 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Quartz 14808-60-7	= 500 mg/kg (Rat)	-	-

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (dermal) 35956 Mg/kg

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

According to IARC, Volume 93, no significant exposure to primary particles of carbon black is thought to occur from use in paints since the pigment is bound to other materials.

Chemical Name	ACGIH	IARC	NTP	OSHA
Carbon black 1333-86-4	A3	Group 2B		X
Quartz 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen. A3 - Animal Carcinogen.

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans. Group 2B - Possibly Carcinogenic to Humans.

NTP (National Toxicology Program)

Known - Known Carcinogen.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present.

Skin corrosion/irritation Not applicable

Serious eye damage/eye irritation Not applicable

Skin sensitization Not applicable

Respiratory sensitization Not applicable

Germ cell mutagenicity Not applicable

Carcinogenicity May cause cancer

Reproductive Toxicity Not applicable

Specific target organ toxicity (single exposure) Not applicable

Specific target organ toxicity (repeated exposure) Not applicable

Aspiration hazard Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Environmental precautions Prevent product from entering drains.

Marine pollutant This material meets the definition of a marine pollutant

Persistence and degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

- Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated packaging** Improper disposal or reuse of this container may be dangerous and illegal. Empty containers must be scrapped or reconditioned.

Section 14: TRANSPORT INFORMATION

	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
14.1 UN/ID no	UN3082	UN3082	UN3082
14.2 Proper shipping name	Environmentally hazardous substances, liquid, n.o.s Trizinc diphosphate Zinc oxide	Environmentally hazardous substances, liquid, n.o.s Trizinc diphosphate Zinc oxide	Environmentally hazardous substances, liquid, n.o.s Trizinc diphosphate Zinc oxide
14.3 Hazard Class	9	9	9
14.4 Packing Group	III	III	III
14.5 Environmental hazard Yes			
Marine pollutant	This material meets the definition of a marine pollutant		
Marine pollutant	Trizinc diphosphate , Zinc oxide		
14.6 Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29	274, 335 EmS-No F-A, S-F	A97, A158, A197
	Emergency Response Guide Number 171		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			No information available

The supplier may apply one of the following exceptions: Combustible Liquid (49 CFR 173.150(f)); Consumer Commodity (49 CFR 173.150(c), ICAO/IATA SP A112); Limited Quantity (49 CFR 173.150(b), ICAO Part 3 Chapter 4, IATA 2.7, IMDG Chapter 3.4); Viscous Liquid (49 CFR 173.121(b), IMDG 2.3.2.2, IATA 3.3.3.1.1, ICAO 3.2.2, ADR 2.2.3.1.5); Does Not Sustain Combustion (49 CFR 173.120(a), IATA 3.3.1.3, ICAO 3.1.3, IMDG 2.3.1.3, ADR 2.2.3.1.1 Note 1); or others as allowed under hazardous materials/dangerous goods regulations.

Section 15: REGULATORY INFORMATION

International Inventories

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory All components are listed or exempt from listing.
- DSL** - Canadian Domestic Substances List All components are listed or exempt from listing.

US Federal Regulations

Chemical Name	SARA 313 - Threshold Values %	Metals	Hazardous air pollutants (HAPs) content
Trizinc diphosphate 7779-90-0 5 - 10	1	Zinc	
Ethylene glycol monopropyl ether 2807-30-9 3 - 5	1		Present

SARA 311/312 Hazard Categories

- | | |
|--|-----|
| Acute health hazard | No |
| Chronic Health Hazard | Yes |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

US State Regulations

Rule 66 status of product

Not photochemically reactive.

California Proposition 65

WARNING! This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

U.S. EPA Label information

EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Water 7732-18-5
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Inorganic Inert
Trizinc diphosphate 7779-90-0
Proprietary Inert
Ethylene glycol monopropyl ether 2807-30-9
Carbon black 1333-86-4
Quartz 14808-60-7

Section 16: OTHER INFORMATION

HMIS

Health hazards 0*

* = Chronic Health Hazard

Flammability 1

Physical hazards 0

Personal Protection X

Supplier Address

Valspar Coatings
5400 Avenue Of The Cities
Moline, IL 61265
309-762-7546

Prepared By Product Stewardship

Revision date 07-Aug-2017

Revision Note No information available

Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. **UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

End of Safety Data Sheet

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FCL207LF
Product Name: Freiclean 207LF
Revision Date: Jun 28, 2016 **Date Printed:** Jun 28, 2016
Version: 1.1 **Supersedes Date:** Nov 19, 2014
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:
Product/Recommended Uses: Metal Cleaning

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity - Repeated Exposure - Category 2
Skin Corrosion - Category 1A
Serious Eye Damage - Category 1
Germ Cell Mutagenicity - Category 2
Oxidizing Solids Category 3
Acute aquatic toxicity - Category 3
Chronic aquatic toxicity - Category 3
Corrosive to metals Category 1
Acute toxicity Oral Category 4

Pictograms:



Signal Word:

Danger

Hazardous Statements - Physical:

H290 - May be corrosive to metals
H272 - May intensify fire; Oxidizer

Hazardous Statements - Health:

H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H373 - May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H302 - Harmful if swallowed
H341 - Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Hazardous Statements - Environmental:

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - General:

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.
- P103 - Read label before use.

Precautionary Statements - Prevention:

- P234 - Keep only in original packaging.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P264 - Wash ? thoroughly after handling.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 - Avoid release to the environment.
- P220 - Keep away from clothing and other combustible materials.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P270 - Do not eat, drink or smoke when using this product.

Precautionary Statements - Response:

- P305 + P390 - IF IN EYES: Absorb spillage to prevent material damage.
- P351 + P301 + P338 - Rinse cautiously with water for several minutes. IF SWALLOWED: Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor/?
- P330 + P331 - Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P363 - Wash contaminated clothing before reuse.
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P321 - Specific treatment (see ? on this label).
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P314 - Get Medical advice/attention if you feel unwell.
- P370 + P378 - In case of fire: Use ... to extinguish.
- P301 + P308 + P312 - IF SWALLOWED: IF exposed or concerned: Call a POISON CENTER/doctor/... if you feel unwell.
- P313 - Get medical advice/attention.
- P330 - Rinse mouth.

Precautionary Statements - Storage:

- P406 - Store in a corrosive resistant/? container with a resistant inner liner.
- P405 - Store locked up.

Precautionary Statements - Disposal:

- P501 - Dispose of contents/container to ?

4.06

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	45% - 80%
0001310-58-3	POTASSIUM HYDROXIDE	15% - 25%
299-27-4	potassium (2R,3S,4R,5R)-2,3,4,5,6-pentahydroxyhexanoate	2% - 6%
0000527-07-1	SODIUM GLUCONATE	1.00% - 2%
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.00% - 2%

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

IF exposed or concerned: Get medical advice/attention.

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Local neutralization of the exposed skin using weak vinegar solution. Then flush the effected skin area with large amounts of cold water.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Never apply neutralizers or ointments unless prescribed by a physician.

Ingestion:

Drink large quantities of water. MATERIAL IS CORROSIVE, DO NOT INDUCE VOMITING. Should vomiting occur, drink more water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media:

None

Specific Hazards in Case of Fire:

Direct water spray on the concentrated material can cause a mild exothermic (heat generating) reaction.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Firefighters should wear recommended protective clothing to guard against alkali burns.

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

If material is powdered sweep up and return to drum or add to processing tank. For liquids: Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Flush spill area with large amounts of water and then neutralize with dilute muriatic (hydrochloric) acid.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

DO NOT FREEZE. Store drums indoor, away from alkalis, in a ventilated area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Do not store this chemical in unlined steel drums.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
POTASSIUM HYDROXIDE									2			

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
POTASSIUM HYDROXIDE				C 2

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

% Solids By Weight	30.17000%
% VOC	0.03565%
Specific Gravity	1.25303
Density	10.45700 lb/gal

Density VOC	3.727952E-03 lb/gal
VOC Actual	0.44672 g/l
VOC Actual	3.727952E-03 lb/gal

Appearance	Yellow/Brown Clear Liquid
Odor Threshold	N.A.
Odor Description	Odorless
pH	>12
Water Solubility	In all proportions
Flammability	Will not burn
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	Same as water
Vapor Density	N.A.
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	220 °F
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	0
Evaporation Rate	Same as water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc, or other alkali sensitive metals or alloys. Mixture of this chemical with acids can cause a violent exothermic (heat generating) reaction.

Hazardous Decomposition Products:

Decomposition products include oxides of potassium, phosphorus, carbon, and nitrogen

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes severe skin burns and eye damage

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye damage

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0001310-58-3 POTASSIUM HYDROXIDE

LD50 (oral, rat): 365 mg/kg (7)

LD50 (oral, male rat): 273 mg/kg (8)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Neutralization, precipitation and separation of heavy metal salts (due to processing metals with this chemical) may be required.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Proper shipping name: Potassium Hydroxide Solution

ID Number: UN1814

D.O.T. Hazard Class: 8

Packing Group: II

D.O.T. Labeling Required: Corrosive

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	45% - 80%	TSCA
0001310-58-3	POTASSIUM HYDROXIDE	15% - 25%	CERCLA,SARA312,TSCA,ACGIH
0000527-07-1	SODIUM GLUCONATE	1.00% - 2%	SARA312,TSCA
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.- hydroxy-, phosphate	1.00% - 2%	SARA312,TSCA
NA-ERAEnviro	Non Hazardous Volatile	0.10% - 2%	SARA312
0007632-00-0	SODIUM NITRITE	0.09% - 0.98%	CERCLA,SARA312,SARA313,TSCA

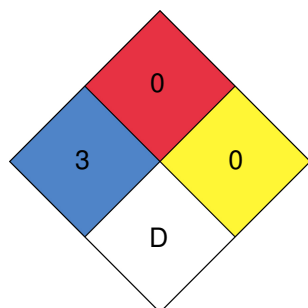
0061790-85-0	ETHOXYLATED N-TALLOW ALKYLTRIMETHYLENEDIAMINE	0.09% - 0.90%	SARA312,VOC,TSCA
0127036-24-2	Poly(oxy-1,2-ethanediyl), alpha.-undecyl-.omega.-hydroxy-, branched and linear	0.09% - 0.85%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

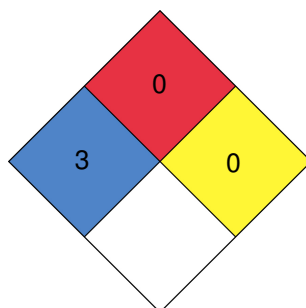
GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



Chronic :

Version 1.1:

Revision Date: Jun 28, 2016

;

Version 1.0:

Revision Date: Nov 19, 2014

First Edition.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FBD D36
Product Name: Freibond D36
Revision Date: Aug 28, 2017 **Date Printed:** Aug 28, 2017
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:

SECTION 2) HAZARDS IDENTIFICATION

Classification

Acute aquatic toxicity - Category 2
Carcinogenicity - Category 2
Corrosive to metals - Category 1
Serious Eye Damage - Category 1
Skin Irritation - Category 2
Skin Sensitizer - Category 1
Specific Target Organ Toxicity - Repeated Exposure - Category 2

Pictograms



Signal Word

Danger

Hazardous Statements - Health

H318 - Causes serious eye damage
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure.

Hazardous Statements - Physical

H290 - May be corrosive to metals

Hazardous Statements - Environmental

H401 - Toxic to aquatic life

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention

- P273 - Avoid release to the environment.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P234 - Keep only in original packaging.
- P264 - Wash thoroughly after handling.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

- P308 + P313 - IF exposed or concerned: Get medical advice/attention.
- P390 - Absorb spillage to prevent material damage.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P321 - Specific treatment (see section 4 on this SDS).
- P332 + P313 - If skin irritation occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing. And wash it before reuse.
- P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
- P314 - Get Medical advice/attention if you feel unwell.

Precautionary Statements - Storage

- P405 - Store locked up.
- P406 - Store in a corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

P501 - Dispose of contents/container to disposal recycling center. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Acute toxicity of less than one percent of the mixture is unknown

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	60.0% - 90.0%
0007558-80-7	SODIUM DIHYDROGEN PHOSPHATE	16.0% - 25.0%
0010039-54-0	HYDROXYLAMINE SULFATE (2:1)	2.0% - 6.0%
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.9% - 2.5%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

- Remove source of exposure or move person to fresh air and keep comfortable for breathing.
- Get medical advice/attention if you feel unwell or are concerned.

Skin Contact

Rinse/wash with lukewarm, gently flowing water and mild soap for 15 to 20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion

Immediately call poison control or a physician.

Do not induce vomiting.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

No data available.

Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Specific Hazards in Case of Fire

Product is an aqueous mixture, which will not burn as supplied.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Guard against acid splash

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Recommended Equipment

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Neutralize residue with soda ash and flush spill area with water.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Open containers slowly, on a stable surface. Empty containers may contain residual liquid or vapors. Empty containers should be handled with care.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ventilation should be corrosion proof.
Provide local exhaust at points of emissions.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
---------------	----------------------	------------------------	-------------------------	-----------------------	--------------------------------	--------------------	-----------------------------	-----------------------	-------------------------	------------------------	--------------------------	---------------------

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
---------------	-----------------------	-------------------------	------------------------	--------------------------

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

% Solids By Weight	30.98380%
% VOC	0.22500%
Density	9.64791 lb/gal
Density VOC	0.02171 lb/gal
<hr/>	
Appearance	Clear to yellow transparent liquid
Odor Threshold	N.A
Odor Description	Almost odorless
pH	1 - 5
Water Solubility	
Flammability	Will not burn
Flash Point Symbol	N.A
Flash Point	N.A
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Similar to water

Vapor Density	Similar to water
Freezing Point	<30 °F
Melting Point	< 40 °F
Low Boiling Point	> 200 °F
High Boiling Point	N.A
Auto Ignition Temp	N.A
Decomposition Pt	N.A
Evaporation Rate	Similar to water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization

Will not occur.

Incompatible Materials

Strong Bases and alkali's can cause an exothermic (heat generating) reaction.
This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics.
Do not mix with solutions containing ammonia or bleach.

Hazardous Decomposition Products

May liberate hydrogen fluoride. Decomposes with heat to produce oxides of nitrogen.

Oxides of carbon (COx), Hydrocarbons, Oxygen, Hydrogen, Carbon, acrid vapors, sodium compounds, and oxides of nitrogen.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

No Data Available

Aspiration Hazard

No Data Available

Carcinogenicity

Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound using IP 346.

Germ Cell Mutagenicity

No Data Available

Reproductive Toxicity

No Data Available

Respiratory/Skin Sensitization

May cause an allergic skin reaction

Serious Eye Damage/Irritation

Causes serious eye damage

Skin Corrosion/Irritation

Causes skin irritation

Specific Target Organ Toxicity - Repeated Exposure

May cause damage to organs through prolonged or repeated exposure.

Specific Target Organ Toxicity - Single Exposure

No Data Available

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic life

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No Data Available

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Neutralization, precipitation and separation of heavy metal salts (due to processing metals with this chemical) may be required.

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

D.O.T. Hazard Class: 8

Packing Group: III

D.O.T. Labeling Required: Corrosive

IMDG Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

IATA Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	60.0% - 90.0%	TSCA
0007558-80-7	SODIUM DIHYDROGEN PHOSPHATE	16.0% - 25.0%	SARA312,TSCA
0010039-54-0	HYDROXYLAMINE SULFATE (2:1)	2.0% - 6.0%	SARA312,TSCA
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.9% - 2.5%	SARA312,TSCA
0000123-91-1	1,4-DIOXANE	Trace	SARA313, CERCLA,SARA312,TSCA,RCRA,CA_Prop65 - California Proposition 65

SECTION 16) OTHER INFORMATION

OTHER INFORMATION

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

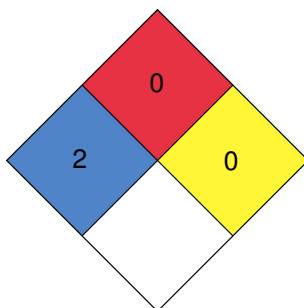
GLOSSARY

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	/ 2
FLAMMABILITY	0
Physical Hazard	0
Personal Protection	D

NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

Version 1.0:

Revision Date: Aug 28, 2017

Version 1.0

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

FONRSX
FreiCon RSX
Jun 12, 2015

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID : FONRSX
Product Name : FreiCon RSX
Revision Date : Jun 12, 2015 **Date Printed :** Jun 12, 2015
Version: 1.0 **Supersedes Date :** N.A.
Manufacturer's Name : Freiborne Industries, Inc
Address : 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone : 800-424-9300
Information Phone : 248-333-2490
Fax :
Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Irritation - Category 3
Eye Irritation - Category 2
Corrosive to metals Category 1

Pictograms:



Signal Word:

Warning

Hazardous Statements - Physical:

H290 - May be corrosive to metals

Hazardous Statements - Health:

H319 - Causes serious eye irritation
H316 - Causes mild skin irritation

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention:

P234 - Keep only in original packaging.
P264 - Wash ? thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response:

P390 - Absorb spillage to prevent material damage.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

Precautionary Statements - Storage:

P406 - Store in a corrosive resistant/? container with a resistant inner liner.

Acute toxicity of 4.06% of the mixture is unknown

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0007732-18-5	WATER	59.00% - 100.00%
0000057-55-6	PROPYLENE GLYCOL	3.00% - 5.00%
Proprietary	Organometallic compound, proprietary	3.00% - 5.00%
0007647-01-0	HYDROCHLORIC ACID	0.00% - 0.50%

SECTION 4) FIRST-AID MESURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell or are concerned.

Skin Contact:

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion:

Rinse mouth. Drink plenty of water. Obtain medical attention.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

No data available.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus(SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Neutralize residue with soda ash and flush spill area with water.

SECTION 7) HANDLING AND STORAGE

General:

- Wash hands after use.
- Do not get in eyes, on skin or on clothing.
- Do not breathe vapors or mists.
- Use good personal hygiene practices.
- Eating, drinking and smoking in work areas is prohibited.
- Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

DO NOT FREEZE. Store drums indoors in an area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep drums closed when not in use and wash thoroughly after handling. Chemical storage areas should be designed to contain chemical spills and leaks in such a manner that the chemical may be salvaged or treated.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Provide local exhaust for steam at process tank if heated.
- Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
HYDROCHLORIC ACID	5 ceiling	7 ceiling			1							

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
HYDROCHLORIC ACID			C 2	

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	8.52021 lb/gal
% Solids By Weight	3.29490%
Density VOC	0.35614 lb/gal
% VOC	4.18000%
VOC Actual	0.35614 lb/gal
VOC Actual	42.67683 g/l

Appearance	Light yellow liquid with slight solvent odor
Odor Threshold	N.A
Odor Description	Slight solvent odor
pH	4.2 (1% Soplution)
Water Solubility	Soluble
Flammability	Flash Point at or above 200 °F
Flash Point Symbol	N.A
Flash Point	Not Determined
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Same as water
Vapor Density	> 1
Freezing Point	32 °F
Melting Point	32 °F
Low Boiling Point	212 °F
High Boiling Point	369 °F
Auto Ignition Temp	N.A
Decomposition Pt	Not Determined
Evaporation Rate	Same as water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Strong: bases, acids, oxidizing agents, and reducing agents.

Hazardous Decomposition Products:

Oxides of Carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes mild skin irritation

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

No Data Available

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0007647-01-0 HYDROCHLORIC ACID

LC50 (rat): 8300 mg/m3 (5666 ppm) (30-minute exposure) (2)
LC50 (rat): 45600 mg/m3 (31008 ppm) (5-minute exposure) (2)
LC50 (mouse): 3100 mg/m3 (2142 ppm) (30-minute exposure) (2)
LC50 (mouse): 16500 mg/m3 (11238 ppm) (5-minute exposure) (2) Symp
LD50 (oral, rabbit): 900 mg/kg (5)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No Data Available

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Packing Group: III

Not D.O.T. Regulated

No labeling required

Proper Shipping Name: Metal treatment compound, non-hazardous

IMDG Information:

Not regulated.

IATA Information:

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000057-55-6	PROPYLENE GLYCOL	3% - 5%	SARA312,TSCA
0007647-01-0	HYDROCHLORIC ACID	0.0% - 0.5%	CERCLA,SARA312,SARA313,TSCA
0007732-18-5	WATER	59% - 100%	TSCA

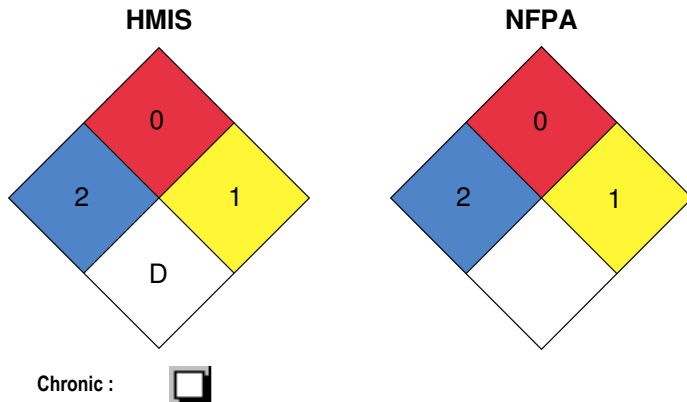
SECTION 16) OTHER INFORMATION

OTHER INFORMATION:

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FGRD303
Product Name: FreiGuard 303
Revision Date: Mar 17, 2015 **Date Printed:** Feb 10, 2016
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Irritation - Category 2

Eye Irritation - Category 2

Pictograms:



Signal Word:

Warning

Hazardous Statements - Health:

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention:

P264 - Wash thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response:

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P321 - Specific treatment (see section 4 on this SDS).

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing. And wash it before reuse.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

No precautionary statement available.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	40% - 65%
0068130-12-1	Boric acid, 2-aminoethyl ester	30% - 45%
0007320-34-5	TETRAPOTASSIUM PYROPHOSPHATE	2% - 6%
0000141-43-5	ETHANOLAMINE	2% - 4%

SECTION 4) FIRST-AID MESURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell or are concerned.

Skin Contact:

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion:

Rinse mouth. Drink plenty of water. Obtain medical attention.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

Product is an aqueous mixture, which will not burn as supplied.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with a suitable absorbent and then place in a corrosion resistant chemical waste container. Do not allow spillage into sewers, streams or storm conduits.

SECTION 7) HANDLING AND STORAGE

General:

- Wash hands after use.
- Do not get in eyes, on skin or on clothing.
- Do not breathe vapors or mists.
- Use good personal hygiene practices.
- Eating, drinking and smoking in work areas is prohibited.
- Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.
 DO NOT FREEZE. Store drums indoors in an area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep drums closed when not in use and wash thoroughly after handling. Chemical storage areas should be designed to contain chemical spills and leaks in such a manner that the chemical may be salvaged or treated.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.
 Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.
 Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Provide local exhaust for steam at process tank if heated.
- Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
ETHANOLAMINE	3	6			1			3	8	6	15	

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)

ETHANOLAMINE	3	7.5	6	15
--------------	---	-----	---	----

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties

Density	10.09826 lb/gal
% Solids By Weight	42.60000%
% VOC	2.50000%
Density VOC	0.25246 lb/gal
VOC Actual	0.25246 lb/gal
VOC Actual	30.25186 g/l

Appearance	Clear to amber/yellow liquid with amine odor
Odor Threshold	N.A
Odor Description	Odorless
pH	10.6
Water Solubility	complete
Flammability	Will not burn
Flash Point Symbol	N.A
Flash Point	
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Not Determined
Vapor Density	Not Determined
Freezing Point	0 °C
Melting Point	N.A
Low Boiling Point	100 °C
High Boiling Point	N.A
Auto Ignition Temp	N.A
Decomposition Pt	N.A
Evaporation Rate	Similar to water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Strong Acids.

Oxidizers

Monoethanolamine reacts violently with acetic acid, acetic anhydride, acrolein, acrylic acid, acrylonitrile, chlorosulfonic acid, epichlorohydrin, hydrochloric acid, hydrofluoric acid, sulfuric acid, mesityl oxide, nitric acid, oleum, Isopropyl lactone and vinyl acetate.

Hazardous Decomposition Products:

No data available.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes skin irritation

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

No Data Available

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0000141-43-5 ETHANOLAMINE

LD50 (oral, rat): 1720 mg/kg (10); 2100 mg/kg (3); 2740 mg/kg (3,8)

LD50 (oral, mouse): 700 mg/kg (10)

LD50 (oral, guinea pig): 620 mg/kg (10)

LD50 (oral, rabbit): 1000 mg/kg (10)

LD50 (dermal, rabbit): 1018 mg/kg (cited as 1 mL/kg) (10)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No Data Available

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Not D.O.T. Regulated

No labeling required

IMDG Information:

Not regulated.

IATA Information:

Not regulated.

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	40% - 65%	TSCA
0068130-12-1	Boric acid, 2-aminoethyl ester	30% - 45%	SARA312,TSCA
0007320-34-5	TETRAPOTASSIUM PYROPHOSPHATE	2% - 6%	SARA312,TSCA
0000141-43-5	ETHANOLAMINE	2% - 4%	SARA312,TSCA

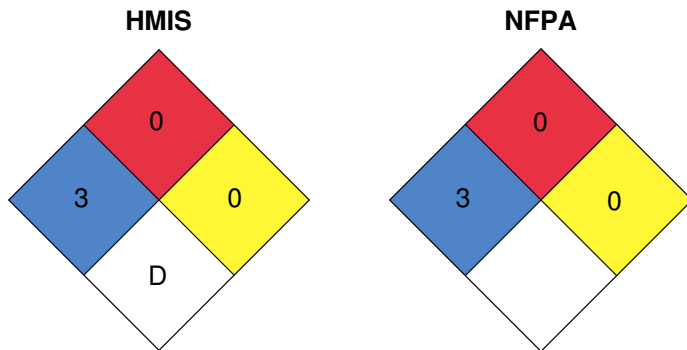
SECTION 16) OTHER INFORMATION


OTHER INFORMATION:

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



Chronic : 

Version 1.0:

Revision Date: Mar 17, 2015

First Edition.; ; ;

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Date: October 06, 2017

Product Number: **WLA2131**
Product Description: **BLACK ARMOUR DIP PRIMER**

Specifications		
Physical Characteristics:	Lb/Gal	g/L
Density of Product	11.54	1383
Density of Organic Solvent	7.29	874
Non-Volatile Mass (%):	57.93	57.93
Non-Volatile Volume (%):	41.39	41.39
Total Volatiles by Weight (%):	42.07	42.07
H2O by Weight (%):	39.82	39.82
H2O by Volume (%):	55.05	55.05
Exempts by Weight (%):	0.04	0.04
Exempts by Volume (%):	0.07	0.07
VOC by Weight (%):	2.21	2.21
VOC Information:		
Coating VOC (VOC less water and exempt solvents):	0.57	68
Material VOC (VOC with water and exempt solvents):	0.25	30
Wgt VOC/Vol Solids:	0.62	74
Wgt VOC/Wgt of Solids*:	0.04	0.04
HAP Information:		
Wgt VHAP/Wgt of Solids*:	0.00	0.00
Wgt VHAP/Vol of Solids:	0.02	2
Wgt VHAP/Vol of Product:	0.01	1
% VHAP:	0.07	0.07
Wgt Total HAP/Wgt of Solids*:	0.00	0.00
Wgt Total HAP/Vol of Solids:	0.02	2
Wgt Total HAP/Vol of Product:	0.01	1
% Total HAP:	0.07	0.07
Photochemically Reactive (Rule-66 / CA-102):		NO
Mix Ratio:		***Not Available ***

* Values represented Lb/Lb or g/g.
Reported HAP information includes any HAP ingredients present below de minimis concentrations.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
2-Butoxyethanol	111-76-2	2.06	0.24	28	0.57	69
Regulatory Information						
Chemical Name	CAS Number	Weight %	HAP	SARA 313		
2-Butoxyethanol	111-76-2	2.06	NO	YES		
Zinc oxide	1314-13-2	1.61	NO	YES		

You have requested certain confidential information about our products for the purpose of your compliance with environmental, safety or regulatory matters. By accepting this document you agree to maintain this information in confidence and not disclose it to any third party without the prior written permission of Valspar. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. **UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT.** Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option.

Date: October 06, 2017

Product Number: **WEA0110A**
Product Description: **AQUASPAR 100 WB BLACK EPOXY PRIMER**

Specifications		
Physical Characteristics:	Lb/Gal	g/L
Density of Product	10.53	1262
Density of Organic Solvent	7.44	892
Non-Volatile Mass (%):	48.76	48.76
Non-Volatile Volume (%):	34.83	34.83
Total Volatiles by Weight (%):	51.24	51.24
H2O by Weight (%):	47.72	47.72
H2O by Volume (%):	60.19	60.19
Exempts by Weight (%):	0.00	0.00
Exempts by Volume (%):	0.00	0.00
VOC by Weight (%):	3.52	3.52
VOC Information:		
Coating VOC (VOC less water and exempt solvents):	0.93	111
Material VOC (VOC with water and exempt solvents):	0.37	44
Wgt VOC/Vol Solids:	1.06	127
Wgt VOC/Wgt of Solids*:	0.07	0.07
HAP Information:		
Wgt VHAP/Wgt of Solids*:	0.06	0.06
Wgt VHAP/Vol of Solids:	0.92	110
Wgt VHAP/Vol of Product:	0.32	38
% VHAP:	3.06	3.06
Wgt Total HAP/Wgt of Solids*:	0.06	0.06
Wgt Total HAP/Vol of Solids:	0.92	110
Wgt Total HAP/Vol of Product:	0.32	39
% Total HAP:	3.06	3.06
Photochemically Reactive (Rule-66 / CA-102):		NO
Mix Ratio:		6.00 : 1

* Values represented Lb/Lb or g/g.
Reported HAP information includes any HAP ingredients present below de minimis concentrations.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
Ethylene glycol monopropyl ether	2807-30-9	3.06	0.32	39	0.92	111
Regulatory Information						
Chemical Name	CAS Number	Weight %	HAP	SARA 313		
Trizinc diphosphate	7779-90-0	7.68	NO	YES		
Ethylene glycol monopropyl ether	2807-30-9	3.06	YES	YES		

You have requested certain confidential information about our products for the purpose of your compliance with environmental, safety or regulatory matters. By accepting this document you agree to maintain this information in confidence and not disclose it to any third party without the prior written permission of Valspar. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. **UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT.** Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option.

SAFETY DATA SHEET

FONRSX
FreiCon RSX
Jun 12, 2015

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID : FONRSX
Product Name : FreiCon RSX
Revision Date : Jun 12, 2015 **Date Printed :** Jun 12, 2015
Version: 1.0 **Supersedes Date :** N.A.
Manufacturer's Name : Freiborne Industries, Inc
Address : 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone : 800-424-9300
Information Phone : 248-333-2490
Fax :
Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Irritation - Category 3
Eye Irritation - Category 2
Corrosive to metals Category 1

Pictograms:



Signal Word:

Warning

Hazardous Statements - Physical:

H290 - May be corrosive to metals

Hazardous Statements - Health:

H319 - Causes serious eye irritation
H316 - Causes mild skin irritation

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention:

P234 - Keep only in original packaging.
P264 - Wash ? thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response:

P390 - Absorb spillage to prevent material damage.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

Precautionary Statements - Storage:

P406 - Store in a corrosive resistant/? container with a resistant inner liner.

Acute toxicity of 4.06% of the mixture is unknown

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0007732-18-5	WATER	59.00% - 100.00%
0000057-55-6	PROPYLENE GLYCOL	3.00% - 5.00%
Proprietary	Organometallic compound, proprietary	3.00% - 5.00%
0007647-01-0	HYDROCHLORIC ACID	0.00% - 0.50%

SECTION 4) FIRST-AID MESURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell or are concerned.

Skin Contact:

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion:

Rinse mouth. Drink plenty of water. Obtain medical attention.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

No data available.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus(SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Neutralize residue with soda ash and flush spill area with water.

SECTION 7) HANDLING AND STORAGE

General:

- Wash hands after use.
- Do not get in eyes, on skin or on clothing.
- Do not breathe vapors or mists.
- Use good personal hygiene practices.
- Eating, drinking and smoking in work areas is prohibited.
- Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

DO NOT FREEZE. Store drums indoors in an area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep drums closed when not in use and wash thoroughly after handling. Chemical storage areas should be designed to contain chemical spills and leaks in such a manner that the chemical may be salvaged or treated.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.
Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Provide local exhaust for steam at process tank if heated.
- Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
HYDROCHLORIC ACID	5 ceiling	7 ceiling			1							

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
HYDROCHLORIC ACID			C 2	

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	8.52021 lb/gal
% Solids By Weight	3.29490%
Density VOC	0.35614 lb/gal
% VOC	4.18000%
VOC Actual	0.35614 lb/gal
VOC Actual	42.67683 g/l

Appearance	Light yellow liquid with slight solvent odor
Odor Threshold	N.A
Odor Description	Slight solvent odor
pH	4.2 (1% Soplution)
Water Solubility	Soluble
Flammability	Flash Point at or above 200 °F
Flash Point Symbol	N.A
Flash Point	Not Determined
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Same as water
Vapor Density	> 1
Freezing Point	32 °F
Melting Point	32 °F
Low Boiling Point	212 °F
High Boiling Point	369 °F
Auto Ignition Temp	N.A
Decomposition Pt	Not Determined
Evaporation Rate	Same as water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Strong: bases, acids, oxidizing agents, and reducing agents.

Hazardous Decomposition Products:

Oxides of Carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes mild skin irritation

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

No Data Available

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0007647-01-0 HYDROCHLORIC ACID

LC50 (rat): 8300 mg/m3 (5666 ppm) (30-minute exposure) (2)
LC50 (rat): 45600 mg/m3 (31008 ppm) (5-minute exposure) (2)
LC50 (mouse): 3100 mg/m3 (2142 ppm) (30-minute exposure) (2)
LC50 (mouse): 16500 mg/m3 (11238 ppm) (5-minute exposure) (2) Symp
LD50 (oral, rabbit): 900 mg/kg (5)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No Data Available

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Packing Group: III

Not D.O.T. Regulated

No labeling required

Proper Shipping Name: Metal treatment compound, non-hazardous

IMDG Information:

Not regulated.

IATA Information:

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000057-55-6	PROPYLENE GLYCOL	3% - 5%	SARA312,TSCA
0007647-01-0	HYDROCHLORIC ACID	0.0% - 0.5%	CERCLA,SARA312,SARA313,TSCA
0007732-18-5	WATER	59% - 100%	TSCA

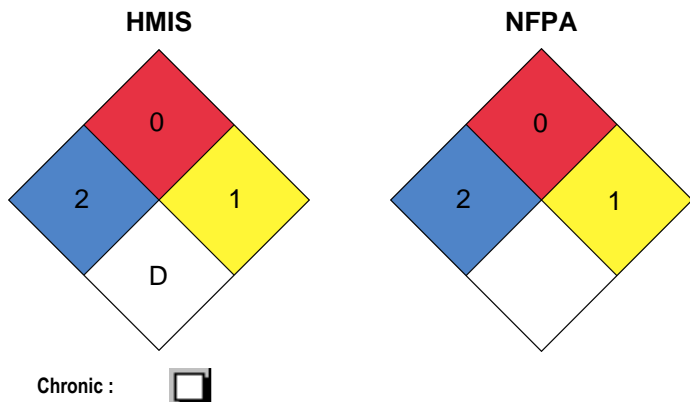
SECTION 16) OTHER INFORMATION

OTHER INFORMATION:

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FBD D36
Product Name: Freibond D36
Revision Date: Aug 28, 2017 **Date Printed:** Aug 28, 2017
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:

SECTION 2) HAZARDS IDENTIFICATION

Classification

Acute aquatic toxicity - Category 2
Carcinogenicity - Category 2
Corrosive to metals - Category 1
Serious Eye Damage - Category 1
Skin Irritation - Category 2
Skin Sensitizer - Category 1
Specific Target Organ Toxicity - Repeated Exposure - Category 2

Pictograms



Signal Word

Danger

Hazardous Statements - Health

H318 - Causes serious eye damage
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure.

Hazardous Statements - Physical

H290 - May be corrosive to metals

Hazardous Statements - Environmental

H401 - Toxic to aquatic life

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention

- P273 - Avoid release to the environment.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P234 - Keep only in original packaging.
- P264 - Wash thoroughly after handling.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

- P308 + P313 - IF exposed or concerned: Get medical advice/attention.
- P390 - Absorb spillage to prevent material damage.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P321 - Specific treatment (see section 4 on this SDS).
- P332 + P313 - If skin irritation occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing. And wash it before reuse.
- P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
- P314 - Get Medical advice/attention if you feel unwell.

Precautionary Statements - Storage

- P405 - Store locked up.
- P406 - Store in a corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

P501 - Dispose of contents/container to disposal recycling center. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Acute toxicity of less than one percent of the mixture is unknown

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	60.0% - 90.0%
0007558-80-7	SODIUM DIHYDROGEN PHOSPHATE	16.0% - 25.0%
0010039-54-0	HYDROXYLAMINE SULFATE (2:1)	2.0% - 6.0%
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.9% - 2.5%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing.
Get medical advice/attention if you feel unwell or are concerned.

Skin Contact

Rinse/wash with lukewarm, gently flowing water and mild soap for 15 to 20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion

Immediately call poison control or a physician.

Do not induce vomiting.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

No data available.

Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Specific Hazards in Case of Fire

Product is an aqueous mixture, which will not burn as supplied.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Guard against acid splash

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Recommended Equipment

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Neutralize residue with soda ash and flush spill area with water.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Open containers slowly, on a stable surface. Empty containers may contain residual liquid or vapors. Empty containers should be handled with care.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ventilation should be corrosion proof.
Provide local exhaust at points of emissions.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
---------------	----------------------	------------------------	-------------------------	-----------------------	--------------------------------	--------------------	-----------------------------	-----------------------	-------------------------	------------------------	--------------------------	---------------------

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
---------------	-----------------------	-------------------------	------------------------	--------------------------

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

% Solids By Weight	30.98380%
% VOC	0.22500%
Density	9.64791 lb/gal
Density VOC	0.02171 lb/gal

Appearance	Clear to yellow transparent liquid
Odor Threshold	N.A
Odor Description	Almost odorless
pH	1 - 5
Water Solubility	
Flammability	Will not burn
Flash Point Symbol	N.A
Flash Point	N.A
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Similar to water

Vapor Density	Similar to water
Freezing Point	<30 °F
Melting Point	< 40 °F
Low Boiling Point	> 200 °F
High Boiling Point	N.A
Auto Ignition Temp	N.A
Decomposition Pt	N.A
Evaporation Rate	Similar to water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization

Will not occur.

Incompatible Materials

Strong Bases and alkali's can cause an exothermic (heat generating) reaction.
This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics.
Do not mix with solutions containing ammonia or bleach.

Hazardous Decomposition Products

May liberate hydrogen fluoride. Decomposes with heat to produce oxides of nitrogen.

Oxides of carbon (COx), Hydrocarbons, Oxygen, Hydrogen, Carbon, acrid vapors, sodium compounds, and oxides of nitrogen.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

No Data Available

Aspiration Hazard

No Data Available

Carcinogenicity

Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound using IP 346.

Germ Cell Mutagenicity

No Data Available

Reproductive Toxicity

No Data Available

Respiratory/Skin Sensitization

May cause an allergic skin reaction

Serious Eye Damage/Irritation

Causes serious eye damage

Skin Corrosion/Irritation

Causes skin irritation

Specific Target Organ Toxicity - Repeated Exposure

May cause damage to organs through prolonged or repeated exposure.

Specific Target Organ Toxicity - Single Exposure

No Data Available

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic life

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No Data Available

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Neutralization, precipitation and separation of heavy metal salts (due to processing metals with this chemical) may be required.

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

D.O.T. Hazard Class: 8

Packing Group: III

D.O.T. Labeling Required: Corrosive

IMDG Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

IATA Information

Proper Shipping Name:: Corrosive liquid, acidic, inorganic, n.o.s., (Phosphoric Acid)

ID Number: UN3264

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	60.0% - 90.0%	TSCA
0007558-80-7	SODIUM DIHYDROGEN PHOSPHATE	16.0% - 25.0%	SARA312,TSCA
0010039-54-0	HYDROXYLAMINE SULFATE (2:1)	2.0% - 6.0%	SARA312,TSCA
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.9% - 2.5%	SARA312,TSCA
0000123-91-1	1,4-DIOXANE	Trace	SARA313, CERCLA,SARA312,TSCA,RCRA,CA_Prop65 - California Proposition 65

SECTION 16) OTHER INFORMATION

OTHER INFORMATION

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

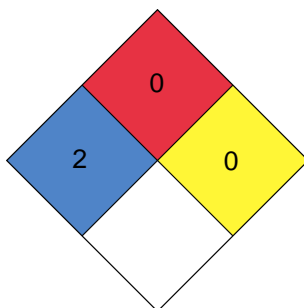
GLOSSARY

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	/ 2
FLAMMABILITY	0
Physical Hazard	0
Personal Protection	D

NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

Version 1.0:

Revision Date: Aug 28, 2017

Version 1.0

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FGRD303
Product Name: FreiGuard 303
Revision Date: Mar 17, 2015 **Date Printed:** Feb 10, 2016
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Skin Irritation - Category 2
Eye Irritation - Category 2

Pictograms:



Signal Word:

Warning

Hazardous Statements - Health:

H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention:

P264 - Wash thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response:

P302 + P352 - IF ON SKIN: Wash with plenty of water.
P321 - Specific treatment (see section 4 on this SDS).
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P362 + P364 - Take off contaminated clothing. And wash it before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

No precautionary statement available.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	40% - 65%
0068130-12-1	Boric acid, 2-aminoethyl ester	30% - 45%
0007320-34-5	TETRAPOTASSIUM PYROPHOSPHATE	2% - 6%
0000141-43-5	ETHANOLAMINE	2% - 4%

SECTION 4) FIRST-AID MESURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell or are concerned.

Skin Contact:

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion:

Rinse mouth. Drink plenty of water. Obtain medical attention.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

Product is an aqueous mixture, which will not burn as supplied.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with a suitable absorbent and then place in a corrosion resistant chemical waste container. Do not allow spillage into sewers, streams or storm conduits.

SECTION 7) HANDLING AND STORAGE

General:

- Wash hands after use.
- Do not get in eyes, on skin or on clothing.
- Do not breathe vapors or mists.
- Use good personal hygiene practices.
- Eating, drinking and smoking in work areas is prohibited.
- Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.
 DO NOT FREEZE. Store drums indoors in an area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep drums closed when not in use and wash thoroughly after handling. Chemical storage areas should be designed to contain chemical spills and leaks in such a manner that the chemical may be salvaged or treated.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.
 Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.
 Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Provide local exhaust for steam at process tank if heated.
- Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
ETHANOLAMINE	3	6			1			3	8	6	15	

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)

ETHANOLAMINE	3	7.5	6	15
--------------	---	-----	---	----

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties

Density	10.09826 lb/gal
% Solids By Weight	42.60000%
% VOC	2.50000%
Density VOC	0.25246 lb/gal
VOC Actual	0.25246 lb/gal
VOC Actual	30.25186 g/l

Appearance	Clear to amber/yellow liquid with amine odor
Odor Threshold	N.A
Odor Description	Odorless
pH	10.6
Water Solubility	complete
Flammability	Will not burn
Flash Point Symbol	N.A
Flash Point	
Viscosity	N.A
Lower Explosion Level	N.A
Upper Explosion Level	N.A
Vapor Pressure	Not Determined
Vapor Density	Not Determined
Freezing Point	0 °C
Melting Point	N.A
Low Boiling Point	100 °C
High Boiling Point	N.A
Auto Ignition Temp	N.A
Decomposition Pt	N.A
Evaporation Rate	Similar to water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Strong Acids.

Oxidizers

Monoethanolamine reacts violently with acetic acid, acetic anhydride, acrolein, acrylic acid, acrylonitrile, chlorosulfonic acid, epichlorohydrin, hydrochloric acid, hydrofluoric acid, sulfuric acid, mesitylene oxide, nitric acid, oleum, Isopropyl lactone and vinyl acetate.

Hazardous Decomposition Products:

No data available.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes skin irritation

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

No Data Available

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0000141-43-5 ETHANOLAMINE

LD50 (oral, rat): 1720 mg/kg (10); 2100 mg/kg (3); 2740 mg/kg (3,8)

LD50 (oral, mouse): 700 mg/kg (10)

LD50 (oral, guinea pig): 620 mg/kg (10)

LD50 (oral, rabbit): 1000 mg/kg (10)

LD50 (dermal, rabbit): 1018 mg/kg (cited as 1 mL/kg) (10)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No Data Available

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Not D.O.T. Regulated

No labeling required

IMDG Information:

Not regulated.

IATA Information:

Not regulated.

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	40% - 65%	TSCA
0068130-12-1	Boric acid, 2-aminoethyl ester	30% - 45%	SARA312,TSCA
0007320-34-5	TETRAPOTASSIUM PYROPHOSPHATE	2% - 6%	SARA312,TSCA
0000141-43-5	ETHANOLAMINE	2% - 4%	SARA312,TSCA

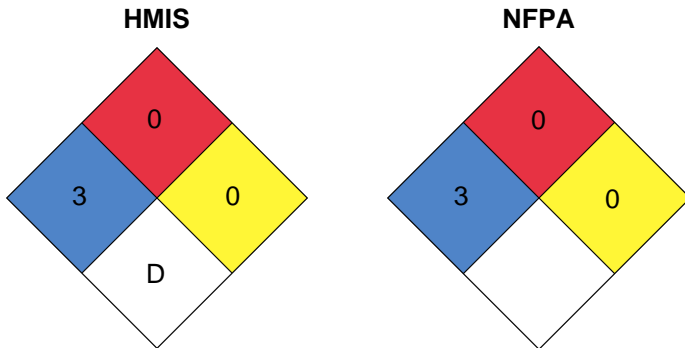
SECTION 16) OTHER INFORMATION

OTHER INFORMATION:

FOR INDUSTRIAL USE ONLY. Do not use this product without reading the process specification.

GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



Chronic :

Version 1.0:

Revision Date: Mar 17, 2015

First Edition.; ;

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FCL207LF
Product Name: Freiclean 207LF
Revision Date: Jun 28, 2016 **Date Printed:** Jun 28, 2016
Version: 1.1 **Supersedes Date:** Nov 19, 2014
Manufacturer's Name: Freiborne Industries, Inc
Address: 15 W. Silverdome Industrial Park Pontiac, MI, US, 48342
Emergency Phone: 800-424-9300
Information Phone Number: 248-333-2490
Fax:
Product/Recommended Uses: Metal Cleaning

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity - Repeated Exposure - Category 2
Skin Corrosion - Category 1A
Serious Eye Damage - Category 1
Germ Cell Mutagenicity - Category 2
Oxidizing Solids Category 3
Acute aquatic toxicity - Category 3
Chronic aquatic toxicity - Category 3
Corrosive to metals Category 1
Acute toxicity Oral Category 4

Pictograms:



Signal Word:

Danger

Hazardous Statements - Physical:

H290 - May be corrosive to metals
H272 - May intensify fire; Oxidizer

Hazardous Statements - Health:

H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H373 - May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H302 - Harmful if swallowed
H341 - Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Hazardous Statements - Environmental:

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - General:

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.
- P103 - Read label before use.

Precautionary Statements - Prevention:

- P234 - Keep only in original packaging.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P264 - Wash ? thoroughly after handling.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 - Avoid release to the environment.
- P220 - Keep away from clothing and other combustible materials.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P270 - Do not eat, drink or smoke when using this product.

Precautionary Statements - Response:

- P305 + P390 - IF IN EYES: Absorb spillage to prevent material damage.
- P351 + P301 + P338 - Rinse cautiously with water for several minutes. IF SWALLOWED: Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor/?
- P330 + P331 - Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P363 - Wash contaminated clothing before reuse.
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P321 - Specific treatment (see ? on this label).
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P314 - Get Medical advice/attention if you feel unwell.
- P370 + P378 - In case of fire: Use ... to extinguish.
- P301 + P308 + P312 - IF SWALLOWED: IF exposed or concerned: Call a POISON CENTER/doctor/... if you feel unwell.
- P313 - Get medical advice/attention.
- P330 - Rinse mouth.

Precautionary Statements - Storage:

- P406 - Store in a corrosive resistant/? container with a resistant inner liner.
- P405 - Store locked up.

Precautionary Statements - Disposal:

- P501 - Dispose of contents/container to ?

4.06

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	45% - 80%
0001310-58-3	POTASSIUM HYDROXIDE	15% - 25%
299-27-4	potassium (2R,3S,4R,5R)-2,3,4,5,6-pentahydroxyhexanoate	2% - 6%
0000527-07-1	SODIUM GLUCONATE	1.00% - 2%
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.-hydroxy-, phosphate	1.00% - 2%

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

IF exposed or concerned: Get medical advice/attention.

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Local neutralization of the exposed skin using weak vinegar solution. Then flush the effected skin area with large amounts of cold water.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Never apply neutralizers or ointments unless prescribed by a physician.

Ingestion:

Drink large quantities of water. MATERIAL IS CORROSIVE, DO NOT INDUCE VOMITING. Should vomiting occur, drink more water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media:

None

Specific Hazards in Case of Fire:

Direct water spray on the concentrated material can cause a mild exothermic (heat generating) reaction.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions:

Firefighters should wear recommended protective clothing to guard against alkali burns.

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Recommended Equipment:

Use protective gloves, boots, goggles or face shield, and clothing. Avoid contact with skin and eyes.

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing.

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

If material is powdered sweep up and return to drum or add to processing tank. For liquids: Dike to contain spill area. Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums. Flush spill area with large amounts of water and then neutralize with dilute muriatic (hydrochloric) acid.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

DO NOT FREEZE. Store drums indoor, away from alkalis, in a ventilated area that will not permit direct access to surface drains or sewers in case of spill or leak. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Do not store this chemical in unlined steel drums.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Eye and shower facility should be available in areas where this chemical is in use

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
POTASSIUM HYDROXIDE									2			

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
POTASSIUM HYDROXIDE				C 2

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

% Solids By Weight	30.17000%
% VOC	0.03565%
Specific Gravity	1.25303
Density	10.45700 lb/gal

Density VOC	3.727952E-03 lb/gal
VOC Actual	0.44672 g/l
VOC Actual	3.727952E-03 lb/gal

Appearance	Yellow/Brown Clear Liquid
Odor Threshold	N.A.
Odor Description	Odorless
pH	>12
Water Solubility	In all proportions
Flammability	Will not burn
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	Same as water
Vapor Density	N.A.
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	220 °F
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	0
Evaporation Rate	Same as water
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable at ambient and operating temperatures.

Conditions to Avoid:

Avoid flame, sparks, extreme heat and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

Acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc, or other alkali sensitive metals or alloys. Mixture of this chemical with acids can cause a violent exothermic (heat generating) reaction.

Hazardous Decomposition Products:

Decomposition products include oxides of potassium, phosphorus, carbon, and nitrogen

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes severe skin burns and eye damage

Carcinogenicity:

No Data Available

Serious Eye Damage/Irritation:

Causes serious eye damage

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

No Data Available

Specific Target Organ Toxicity - Repeated Exposure:

May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Aspiration Hazard:

No Data Available

Acute Toxicity:

No Data Available

0001310-58-3 POTASSIUM HYDROXIDE

LD50 (oral, rat): 365 mg/kg (7)

LD50 (oral, male rat): 273 mg/kg (8)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Neutralization, precipitation and separation of heavy metal salts (due to processing metals with this chemical) may be required.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Proper shipping name: Potassium Hydroxide Solution

ID Number: UN1814

D.O.T. Hazard Class: 8

Packing Group: II

D.O.T. Labeling Required: Corrosive

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	45% - 80%	TSCA
0001310-58-3	POTASSIUM HYDROXIDE	15% - 25%	CERCLA,SARA312,TSCA,ACGIH
0000527-07-1	SODIUM GLUCONATE	1.00% - 2%	SARA312,TSCA
0039464-70-5	Poly(oxy-1,2-ethanediyl), .alpha.-phenyl-.omega.- hydroxy-, phosphate	1.00% - 2%	SARA312,TSCA
NA-ERAEnviro	Non Hazardous Volatile	0.10% - 2%	SARA312
0007632-00-0	SODIUM NITRITE	0.09% - 0.98%	CERCLA,SARA312,SARA313,TSCA

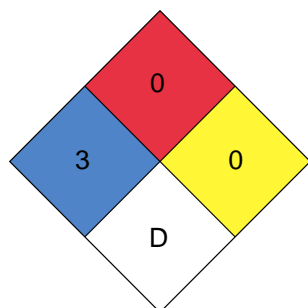
0061790-85-0	ETHOXYLATED N-TALLOW ALKYLTRIMETHYLENEDIAMINE	0.09% - 0.90%	SARA312,VOC,TSCA
0127036-24-2	Poly(oxy-1,2-ethanediyl), alpha.-undecyl-.omega.-hydroxy-, branched and linear	0.09% - 0.85%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

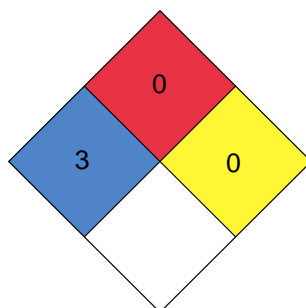
GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



Chronic :

Version 1.1:

Revision Date: Jun 28, 2016

;

Version 1.0:

Revision Date: Nov 19, 2014

First Edition.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Date: October 06, 2017

Product Number: **WLA2131**
Product Description: **BLACK ARMOUR DIP PRIMER**

Specifications		
Physical Characteristics:	Lb/Gal	g/L
Density of Product	11.54	1383
Density of Organic Solvent	7.29	874
Non-Volatile Mass (%):	57.93	57.93
Non-Volatile Volume (%):	41.39	41.39
Total Volatiles by Weight (%):	42.07	42.07
H2O by Weight (%):	39.82	39.82
H2O by Volume (%):	55.05	55.05
Exempts by Weight (%):	0.04	0.04
Exempts by Volume (%):	0.07	0.07
VOC by Weight (%):	2.21	2.21
VOC Information:		
Coating VOC (VOC less water and exempt solvents):	0.57	68
Material VOC (VOC with water and exempt solvents):	0.25	30
Wgt VOC/Vol Solids:	0.62	74
Wgt VOC/Wgt of Solids*:	0.04	0.04
HAP Information:		
Wgt VHAP/Wgt of Solids*:	0.00	0.00
Wgt VHAP/Vol of Solids:	0.02	2
Wgt VHAP/Vol of Product:	0.01	1
% VHAP:	0.07	0.07
Wgt Total HAP/Wgt of Solids*:	0.00	0.00
Wgt Total HAP/Vol of Solids:	0.02	2
Wgt Total HAP/Vol of Product:	0.01	1
% Total HAP:	0.07	0.07
Photochemically Reactive (Rule-66 / CA-102):		NO
Mix Ratio:		***Not Available ***

* Values represented Lb/Lb or g/g.
Reported HAP information includes any HAP ingredients present below de minimis concentrations.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
2-Butoxyethanol	111-76-2	2.06	0.24	28	0.57	69
Regulatory Information						
Chemical Name	CAS Number	Weight %	HAP	SARA 313		
2-Butoxyethanol	111-76-2	2.06	NO	YES		
Zinc oxide	1314-13-2	1.61	NO	YES		

You have requested certain confidential information about our products for the purpose of your compliance with environmental, safety or regulatory matters. By accepting this document you agree to maintain this information in confidence and not disclose it to any third party without the prior written permission of Valspar. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. **UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT.** Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option.

Date: October 06, 2017

Product Number: **WEA0110A**
Product Description: **AQUASPAR 100 WB BLACK EPOXY PRIMER**

Specifications		
Physical Characteristics:	Lb/Gal	g/L
Density of Product	10.53	1262
Density of Organic Solvent	7.44	892
Non-Volatile Mass (%):	48.76	48.76
Non-Volatile Volume (%):	34.83	34.83
Total Volatiles by Weight (%):	51.24	51.24
H2O by Weight (%):	47.72	47.72
H2O by Volume (%):	60.19	60.19
Exempts by Weight (%):	0.00	0.00
Exempts by Volume (%):	0.00	0.00
VOC by Weight (%):	3.52	3.52
VOC Information:		
Coating VOC (VOC less water and exempt solvents):	0.93	111
Material VOC (VOC with water and exempt solvents):	0.37	44
Wgt VOC/Vol Solids:	1.06	127
Wgt VOC/Wgt of Solids*:	0.07	0.07
HAP Information:		
Wgt VHAP/Wgt of Solids*:	0.06	0.06
Wgt VHAP/Vol of Solids:	0.92	110
Wgt VHAP/Vol of Product:	0.32	38
% VHAP:	3.06	3.06
Wgt Total HAP/Wgt of Solids*:	0.06	0.06
Wgt Total HAP/Vol of Solids:	0.92	110
Wgt Total HAP/Vol of Product:	0.32	39
% Total HAP:	3.06	3.06
Photochemically Reactive (Rule-66 / CA-102):		NO
Mix Ratio:		6.00 : 1

* Values represented Lb/Lb or g/g.
Reported HAP information includes any HAP ingredients present below de minimis concentrations.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
Ethylene glycol monopropyl ether	2807-30-9	3.06	0.32	39	0.92	111
Regulatory Information						
Chemical Name	CAS Number	Weight %	HAP	SARA 313		
Trizinc diphosphate	7779-90-0	7.68	NO	YES		
Ethylene glycol monopropyl ether	2807-30-9	3.06	YES	YES		

You have requested certain confidential information about our products for the purpose of your compliance with environmental, safety or regulatory matters. By accepting this document you agree to maintain this information in confidence and not disclose it to any third party without the prior written permission of Valspar. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. **UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT.** Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option.