

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0698-AR-22 AFIN: 50-00006

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Firestone Building Products Company, LLC
1406 Highway 371 North
Prescott, Arkansas 71857

3. PERMIT WRITER:

Joseph Hurt

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Rubber Product Manufacturing for Mechanical Use
NAICS Code: 326291

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
8/23/2016	De Minimis	Use of additional polymer feedstock at mixers and autoclaves (SN-03, SN-103, SN-104, and SN-08A through SN-08G)

6. REVIEWER’S NOTES:

Firestone Building Products Company owns and operates a rubber roofing manufacturing facility located in Prescott, Arkansas. With this permitting action Firestone Building Products requested:

- To use an additional polymer feedstock at the banbury mixers (SN-03, SN-103, and SN-104); and
- To update the autoclaves (SN-08A – SN-08G) to account for the changes in polymer feedstock and cycle time.

The permitted emission increases include 22.8 tpy of VOC.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The last inspection on May 2, 2013 indicated that the facility was complying with all conditions of the permit.

8. PSD APPLICABILITY:

- a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
- b) Is the facility categorized as a major source for PSD? N
- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-503 & SN-504	There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs	40 CFR Part 63, Subpart ZZZZ
SN-505 & SN-506	There are no specific emission limits or pollutants identified, but the rules generally regulate Criteria pollutants	40 CFR Part 60, Subpart IIII

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Allyl Chloride	3.12	0.344	0.01	Yes
Hexane	176	19.3	1.44	Yes
Methanol	262	28.8	0.24	Yes
Methylene Chloride	173	19.1	0.67	Yes
Toluene	75.3	8.28	2.17	Yes
Beryllium	0.00005	5.50E-06	2.00E-06	Yes
Chromium	0.01	1.10E-03	4.00E-04	Yes

12. CALCULATIONS:

SN	Emission Factor Source	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
All PM Sources	Testing		None		PM/PM ₁₀ emissions from all particulate sources are based on testing data from the facility submitted on March 2, 1995 or based on process knowledge.
03, 103, & 104	Testing	lb/lb rubber: 4.2E-04 VOC lb/hr Total HAP: 0.63 (SN-03) 0.29 (SN-103) 0.35 (SN-104)	None		VOC and HAP emission factors are based on stack testing conducted in October 2011 plus a 25% safety factor.
13, 14, 114, 202, 206, 207, 312, 313, 323A, 323B, 330	Source Specific Emission Factors	Varies			VOC and HAP emission factors are based on stack testing conducted in October 2011.
301A, 304, 304A	Source specific emission factor	lb/lb: 6.87E-06 PM/PM ₁₀			Maximum annual capacity of 99,338,400 pounds
08A – 08G	Source Specific Emission Factors	lb/lb rubber: 5.62E-05 VOC lb/hr Total HAP: 0.014 (A - F) 0.005 (G)	--	--	VOC and HAP emission factors are based on stack testing conducted in October 2011 plus a 25% safety factor.
16A & 16B	AP-42: 1.4	lb/MMSCF: 7.6 PM/PM ₁₀ 0.6 SO ₂ 5.5 VOC 84 CO 100 NO _x	--	--	

SN	Emission Factor Source	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
315	Mass Balance	lb/gal 2.1 VOC No HAPs	--	--	Stack testing for primers in excess of 2.1 lb VOC/gal
316	Mass Balance	lb/gal 1.87 VOC 1.87 Toluene			Automated and Manual rolling operations
317, 318	Source Specific Emission Factors	Varies	--	--	VOC and HAP emission factors are based on stack testing conducted for SN-203 in October 2011.
500, 501	Mass Balance		None		Mass Balance assuming 100% of VOC in raw materials is emitted to atmosphere
502	Source Specific Emission Factor	0.58 lb PM/PM ₁₀ Per mandrel cleaned	--	--	--
503 - 506	AP-42, Table 3.3-1	lb/hp-hr: 2.2E-03 PM 2.05E-03 SO ₂ 2.47E-03 VOC 6.68E-03 CO 0.031 NO _x	--	--	Emergency diesel fire pump, emergency generator, and two (2) diesel operated air compressors
700	Source Specific Emission Factors	lb/lb rubber: 0.13 PM 0.0015 VOC	--	--	A single test was conducted on September 26, 2013. Maximum throughput is 3,000 pounds of EPDM per hour and 15,600,000 pounds per year

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
16A & 16B	PM ₁₀ NO _x CO	5 or 201A 7E 10	Within 180 days of issuance of Permit 0689-AR-13, and annually thereafter. After 2 successful tests, the permittee may test once every 5 years.	Verify emissions
16A or 16B	Hexane	18	Within 180 days of issuance of Permit 0689-AR-13.	Verify Hexane emissions
315	VOC	25A & 204	Within 180 days of a new primer, or after an increase in VOC content of an existing primer.	Verify VOC emissions
03, 08A – 08G	VOC HAPs	Bench scale equivalent to approved test methods	Once every 60 months.	To verify site specific values.
03	VOC	25A	Once every 60 months. The last testing was conducted in October 2011.	
	HAPs	SW-846 Method 0031 (modified), and/or EPA TO-15 (modified)		
08A – 08G	VOC HAPs	25A EPA TO-15	Once every 60 months. The last testing was conducted in October 2011.	
700	VOC	25A	No later than September 2014, and once every 60 months thereafter. The last test was conducted on September 26, 2013.	

14. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
03, 103, 104	VOC emission factor	4.20E-04 lb VOC/lb rubber	Monthly	No
08A – 08G		5.620E-05 lb VOC/lb rubber	Monthly	No
03, 103, 104	Annual VOC emissions	27.6 tons per consecutive 12-month period	Monthly	No
	Polymers used, polymer throughput, and polymer emission factor	See Specific Conditions 9 and 10	Monthly	No
08A – 08G	Annual VOC emissions	4.2 tons per consecutive 12-month period	Monthly	No
500	Cold Cleaning Solvent Usage	11.0 gal/month 130 gal/year	Monthly	No
500	Cold Cleaning Solvent VOC Content	8.9 lb/gal	Monthly	No
501	Inks and Cleaners Usage	370 gal/year	Monthly	No
501	Inks and Cleaners VOC Content	7.0 lb/gal	Monthly	No
315	Seam Tape Primer Machine Primer Formulation Limits	2.1 lb/gal (VOC content) or not to exceed 6.3 lb/hr No HAPs	Monthly	No
	Primer Usage	26,280 gal per 12-month period	Monthly	No
	MSDS	Kept on site and updated annually	Continuously	No
	VOC emissions	27.6 tpy	Monthly	No
03, 103	Total Rubber Production Limit	613 MM pounds per consecutive 12-month period	Monthly	No
203	Rubber Production	70 MM lb/year	Monthly	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
16A & 16B	Boiler fuel	Natural gas only	Continuously	No
Plantwide	Carbon Black usage	As specified in the confidential application dated December 2, 2011	Monthly	No
	Pigment usage		Monthly	No
	Clay usage		Monthly	No
	EPDM usage		Monthly	No
	Pigment Oil usage		Monthly	No
	Mineral Oil usage		Monthly	No
	MSDS	Kept on site and updated annually	Continuously	No
316	Primer Pre-Tape Formulation Limit	1.87 lb/gal VOC 1.87 lb/gal Toluene	Monthly	No
	Primer Pre-Tape usage	4,630 gallons per consecutive 12-month	Monthly	No
317 & 318	White tape compound	17,520,000 pounds per consecutive 12-month period	Monthly	No
301A, 304, & 304A	Carbon black unloading	99,338,400 pounds per consecutive 12-month	Monthly	No
503 & 504	Hours of operation (each)	100 hours per consecutive 12-month period	Monthly	No
505	Hours of operation	300 hours per calendar year	Monthly	No
506	Hours of operation	300 hours per calendar year	Monthly	No
505 & 506	Hours of operation	Anything in excess of 100 hours per calendar year must demonstrate that the engine still qualifies as an emergency engine as outlined in §60.4211(f)	Monthly	No
700	EPDM processed	15,600,000 pounds per consecutive 12-month period	Monthly	No

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
13, 206, 207, 323A, 323B, 700	20 %	Department Guidance	Observation
01A, 01B, 02A, 02B, 03, 07, 16A, 16B, 17A, 17B, 18A, 18B, 101A, 101B, 102 -104, 107, 116, 118, 120, 201, 202, 205, 301A, 302, 303, 304, 304A, 305 – 308, 309A, 309B, 310 – 312, 317, 318, 502	5 %	Department Guidance	Observation
503 - 506	20 %	Department Guidance	Annual VE & Daily VE when either source is in operation for more than 24 hours

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Seam Tape Testing Lab Vent	5			0.19			0.095	0.19
Laboratory Oven Vent	5	0.0005		0.14			0.07	0.07
Curing Cooling Tower	13	0.71						
Chiller Cooling Tower	13	0.75						
Process Cooling Tower	13	0.44						
Cooling Tower for Mixtruder	13	0.44						
Day Tanks for SN-317	13			1.09E-4			1.09E-4	1.09E-4

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Comerio Line Shredder	13	0.1		0.1			0.06	0.11
Slab Dip/Soap Tanks	13	1.05						

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0698-AR-21

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Firestone Building
 Products Company, LLC
 Permit Number: 0698-AR-22
 AFIN: 50-00006

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	72.2	95
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	22.8	
Minimum Initial Fee \$	500			
		Permit Fee \$	545.604	
Check if Administrative Amendment <input type="checkbox"/>		Annual Chargeable Emissions (tpy)	95	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	52	52	0
PM ₁₀	52	52	0
PM _{2.5}	0	0	0
SO ₂	0.8	0.8	0
VOC	72.2	95	22.8
CO	56	56	0
NO _x	69.2	69.2	0
Allyl Chloride	0.03	0.01	-0.02
Hexane	9.62	5.9	-3.72
Methanol	1.33	0.82	-0.51
Methylene Chloride	4.44	2.69	-1.75
Toluene	4.95	4.74	-0.21
Beryllium	0.02	0.02	0
Chromium	0.02	0.02	0
Total HAP*	0	5.56	5.56
-----	0	0	0
* Total HAP emissions only include	0	0	0
sources SN-03, SN-103, SN-104,	0	0	0
and SN-08A through SN-08G.	0	0	0