

STATEMENT OF BASIS

For the issuance of Air Permit # 0689-AR-12 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, Incorporated
1406 Highway 371 North
Prescott, Arkansas 71857

3. PERMIT WRITER:

Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

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

5. SUBMITTALS:

8/3/2011

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 the following:

1. Replace the two 12" troesters (SN-13) on the Comerio Calender Line with two 13" troesters;
2. Increase the process rate of the Comerio Calender Line on-line calendar (SN-14) from 24,000 lb/hr to 26,000 lb/hr;
3. Install an automated process for the Quick Prime Plus pre-tape operation;
4. Remove HAPs currently listed at SN-13 and SN-14;
5. Remove the thermal oxidizer as a control device for the Primer/Laminating Machine (SN-315); and
6. Update the process description.

The total permitted emission increases include 2.92 tpy of Toluene. The total permitted emission decreases include 1.2 tpy of PM/PM₁₀ and 2.0 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 February 8, 2011 indicated that the facility was complying with all conditions of the permit. There are no current or pending enforcement issues.

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)
N/A		

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

Non-Criteria Pollutants:

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/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
1, 3- Butadiene	4.42	0.4862	0.18	Yes
Benzene	1.59	0.1749	1.38	No
Cumene	245.78	27.0358	0.30	Yes
POC	52.42	5.7662	0.12	Yes
Epichlorohydrin	1.89	0.2079	0.12	Yes
Ethylbenzene	434.19	47.7609	0.36	Yes
Hexane	176.23	19.3853	6.24	Yes
m- and p-Xylene	434.19	47.7609	1.08	Yes
o-Xylene	434.19	47.7609	0.42	Yes
Dichloromethane	173.68	19.1048	0.36	Yes
Nickel Compounds	0.1	0.011	0.00378 (actual)	Yes
Phenol	19.24	2.1164	0.24	Yes
Toluene	188.40	20.724	4.17	Yes

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Benzene	15.9	13.92	Yes

* Modeling was not updated with this permitting action.

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
120, 109, 08-15, 204,205, 114-116, 323	Rubber Manufacturer Association (RMA) Emission Factors				HAP and VOC emissions calculated based on RMA emission factors for the 4 rubber processes (Calendaring, Curing, Mixing, & Extruding) Annual emissions calculated based on annual thruput limit from permit. Hourly emissions based on maximum hourly capacity of the plant.
315	Mass Balance	lb/gal 6.62 VOC No HAPs	Thermal Oxidizer	95% Capture 95% Destruction	Emissions based on a mass balance calculated, and the capture / destruction efficiency of the TO
15, 500, 501	Mass Balance		None		Mass Balance assuming 100% of VOC in raw materials is emitted to atmosphere
03, 103, 104	Source testing and RMA Factors		Baghouse	95%	VOC and PM/PM ₁₀ emissions based on Feb. 1995 stack test data. HAP emissions based on RMA emission factors for mixing operations.
316	Mass Balance	lb/gal 1.87 VOC 1.87 Toluene			Automated and Manual rolling operations

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
14	VOC	18 and 25A with 204	Within 180 after initial startup	§18.1001
13	PM ₁₀	201 or 201A with 204	Within 180 after initial startup	§18.1001

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)
15	Mineral Oil Usage	30 tons/month 350 tons/year	Monthly	No
15	Mineral Oil VOC Content	5% by weight	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	Primer Machine Primer Formulation Limits	6.60 lb/gal (max density) No HAPs	Monthly	No
315	Primer Usage	60.0 gal/day	Daily	No
		21,900 gal per 12-month period	Monthly	No
03, 103	Total Rubber Production Limit	432 MM lb/year	Monthly	No
03, 103	Further Processed Rubber Limit	316 MM lb/year	Monthly	No
203	Rubber Production	7 MM lb/month 70 MM lb/year	Monthly	No
16A & 16B	Simultaneous Boiler operation	2,232 hr/year	Continuously	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
16A & 16B	Boiler fuel	Natural gas only	Continuously	No
16A & 16B	Boiler fuel usage	73.6 MMSCF/month 882.6 MMSCF/yr	Monthly	No
316	Quick Prime Plus Formulation Limit	1.87 lb/gal VOC 1.87 lb/gal Toluene	Monthly	Yes
	Quick Prime Plus usage	4,630 gallons per consecutive 12-month	Monthly	Yes
Plantwide	Rubber Product Formulations	Cannot use any generic rubber compounds found in AP-42	Monthly	Yes
Plantwide	Formulation log	Type of materials used, MSDS for materials, amount of materials used, and the source which the materials were used	Monthly	Yes
Plantwide	MSDS	Kept on site and updated annually	Continuously	No

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
09-15, 115, 323A & B, 206, 207, 330, 313	20	Department Guidance	Observation
All other Sources	5	Department Guidance	Observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
19	The thermal oxidizer has been removed.

Permit #: 0689-AR-12

AFIN: 50-00006

Page 7 of 7

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Curing Cooling Tower	13	0.71						
Chiller Cooling Tower	13	0.75						
Process Cooling Tower	13	0.44						
Effluent Cooling Tower	13	0.02						
Devulcanization Process	13	0.01		0.202			0.30	0.30

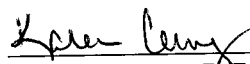
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0689-AR-11

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Karen Cerney, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 08-30-11

Facility Name: Firestone Building
 Products, Incorporated
 Permit Number: 0689-AR-12
 AFIN: 50-00006

			Old Permit	New Permit
\$/ton factor	22.65	Permit Predominant Air Contaminant	75.3	73.3
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	-2	
Minimum Initial Fee \$	500			
		Permit Fee \$	400	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	73.3	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	48.3	47.1	-1.2
PM ₁₀	48.3	47.1	-1.2
SO ₂	0.4	0.4	0
VOC	75.3	73.3	-2
CO	15.1	15.1	0
NO _x	60.9	60.9	0
1,3-Butadiene	0.05	0.05	0
Benzene	3.27	3.27	0
Cumene	0.29	0.29	0
POC	0.24	0.24	0
Epichlorohydrin	0.3	0.3	0
Ethylbenzene	0.46	0.46	0
Hexane	8.77	8.77	0
m- and p-Xylene	2.3	2.3	0
o-Xylene	0.63	0.63	0
Dichloromethane	0.53	0.53	0
Nickel Compounds	0.04	0.04	0
Phenol	0.04	0.04	0
Toluene	4.45	7.37	2.92