Material Safety Data Sheet

Date Prepared: January 1, 2007

1. PRODUCT AND COMPANY INFORMATION

Chemical Product Identification / Product Name

Falcon Foam Expanded Polystyrene (EPS)

Manufacturer Information

Falcon Foam, Division of Atlas Roofing Corporation
8240 Byron Center Road
Byron Center, Michigan 49315
Telephone: 800-917-9138 (8am – 5pm EST weekdays)

Emergency Telephone

CHEMTREC (24 hours everyday): 800-424-9300

2. COMPOSITION AND INGREDIENT INFORMATION

Common Name	Chemical Name	CAS No.	Wt. %
Polystyrene Foam	Ethenylbenzene homopolymer	9003-53-6	95-100%
Pentanes* (isomers)	n-pentane	109-66-0	≤ 5%
	Isopentane	78-78-4	
	Cyclopentane	287-92-3	
Styrene (residual)	Vinyl Benzene	100-42-5	0 – 0.1%

**This is a flammable blowing agent that off-gasses from product. Most of the pentane off-gasses prior to shipment. However, residual blowing agent may gradually off-gas from the foam during storage or use.*

3. HAZARDS IDENTIFICATION

Overview

No unusual conditions are expected from this product after it is aged. Freshly expanded or heated foam may off-gas pentane which can accumulate at hazardous concentrations above the Lower Explosion Limit (LEL) if stored in closed containers or confined areas. To prevent ignition, avoid smoking, keep from open flames and high temperatures. If heated above decomposition temperature or burned, product can emit an irritating dense black smoke and acid gases. Grinding, sawing or fabrication activities can produce dust particles which under certain conditions may ignite or form explosive dust atmospheres.

Appearance and Odor

White or gray solid blocks, sheets, panels or forms with slight hydrocarbon odor.

3. HAZARDS IDENTIFICATION (Continued)

Emergency Overview

	Health	Fire	Reactivity
NFPA Rating:	1	2*	0
HMIS Rating:	1	2*	0

Degree of Hazard
0 – Minimal (Insignificant)
1 – Slight (Minor)
2 – Moderate
3 – Serious (High)
4 – Severe (Extreme)

Potential Health Effects

Summary: Inhalation or eye exposure to dust from this product may cause temporary irritation. Skin exposure to the product may cause mechanical irritation, cuts or punctures.

Routes of Entry: Inhalation, skin and eye contact, and ingestion.

Acute Inhalation: Breathing dust may cause temporary mechanical irritation and coughing. Overexposure to extremely high concentrations of pentane can cause narcotic effects. Signs and symptoms of overexposure to pentane include headache, nausea, dizziness, difficulty walking or sleepiness.

Chronic Inhalation: None identified.

Acute Skin Contact: Direct contact with rough cut foam can cause mechanical abrasion to exposed skin.

Chronic Skin Contact: None identified.

Acute Eye Contact: Eye contact may cause mild mechanical irritation, redness, tearing and blurred vision.

Chronic Eye Contact: None identified.

Acute Ingestion: Ingestion of this material is unlikely if used as intended. However, ingestion of this product may produce gastrointestinal irritation and disturbances.

Chronic Ingestion: None identified.

Carcinogenicity:

Styrene monomer
ACGIH: A4 – Not classifiable as a Human Carcinogen
IARC: 2B – Possibly Carcinogenic to Humans (Vol. 60, 1994)

Medical Conditions Aggravated by Exposure: Treat symptomatically. Specific data that address medical conditions that are generally recognized as being aggravated by exposure to this product are not available. However, chronic respiratory or eye conditions may worsen from exposure to these products.

4. FIRST AID MEASURES

Inhalation: Move person to fresh air. If irritation persists, seek medical attention.

Skin: Wash with mild soap and running water. Remove and launder contaminated clothing before reuse. If irritation develops, seek medical attention.

Eyes: Flush eyes with running water for at least 15 minutes. Seek medical attention if irritation develops.

Ingestion: Ingestion of this material is unlikely. If it does occur, do not induce vomiting; seek medical attention.

Fire: Move to fresh air. Administer oxygen and seek medical attention.

5. FIRE FIGHTING MEASURES

Flash Point and Method: Not applicable
Upper Flammable Limit (UFL): Not applicable
Lower Flammable Limit (LFL): Not applicable
Auto Ignition: 880° F (ASTM D-1929) for expanded polystyrene
Extinguishing Method: Use water spray, water fog, fire-fighting foam or dry chemical or C0_ extinguishing media.

Unusual Fire and Explosion Hazards: Pentane vapors may be emitted from freshly expanded or processed foam or when product is heated. Hazardous concentrations may accumulate inside a sealed container or within confined space areas. Electrostatic discharge can be a source of ignition of accumulated pentane vapors exceeding the L.E.L (lower explosion limit) of 1.5% (15,000 ppm). If ignited, there may be a very high rate of flame propagation and/or an associated explosion. Assure proper ventilation of storage or shipping containers to prevent accumulation of hazardous concentrations of off-gassed pentane.

Hazardous Combustion Products: Burning foam emits a dense, black, irritating smoke with acid gases. Primary combustion products are carbon monoxide, carbon dioxide, and styrene. Other undetermined hydrocarbon fraction could be released in small quantities.

6. ACCIDENTAL RELEASE MEASURES

Land Spill: Scoop up material and put into suitable container for recycling or disposal as a non-hazardous waste in an appropriate recycling or disposal facility.

Water Spill: This material will float and disperse with wind and current. Contain the material with brooms, pick up or remove with a vacuum truck.

Air Release: This material will settle out of the air. If concentrated on land, it can then be scooped up for recycling or disposal as a non-hazardous waste.

7. HANDLING AND STORAGE

Storage Temperature: Below 170° F. **Storage Pressure:** Not applicable.

General Storage: Store in a well-ventilated area. Assure storage containers or areas and shipping containers are adequately ventilated. The flammable vapors of pentane (blowing agent) are heavier than air and may accumulate in low places. "No Smoking – No Matches – No Lighters – No Welding" rules should be enforced.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Work Practices and Engineering Controls: Avoid unnecessary dust exposures when cutting or abrading by using adequate local exhaust or general ventilation. General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits and to prevent accumulation of hazardous concentrations of off-gassed pentane (see section 5).

8. EXPOSURE CONTROL / PERSONAL PROTECTION (Continued)

Personal Protective Equipment:

Eye: Safety glasses or goggles may be worn to reduce the risk of eye injury or irritation.

Respirators: Respiratory protection is not normally required. If dusts are generated up to 10 times above occupational exposure limits, use a NIOSH-approved particulate respirator (disposable filtering dust mask type) with an efficiency rating of N95 or higher (e.g. 3M's 8210, Moldex 2300). Wear an air-purifying respirator with charcoal cartridges or a supplied air respirator when exposure to pentane exceeds exposure limits.

Skin: Gloves, long sleeved shirt and long pants may be worn, as needed, to prevent skin contact and irritation.

Other: None.

INGREDIENT	OSHA PEL	ACGIH TLV	NIOSH REL
Expanded Polystyrene			
PNOC:			
Inhalable	-	10 mg/m3	-
Respirable	5 mg/m3	3mg/m3	-
Total Particulate	15 mg/m3		
Pentanes			
Pentane	1000 ppm	600 ppm	120 ppm 610 (Ceiling)
Cyclopentane	-	600 ppm	600ppm
Styrene	100 ppm 200 ppm (Ceiling) 600 ppm (5 minute peak)	20 ppm 40 ppm (STEL)	50 ppm 100 ppm (STEL)

Additional Information: The products listed in this MSDS do not contain any form of Asbestos.

9. PHYSICAL AND CHEMICAL

Appearance: White or gray solid blocks, sheets, panels or forms

Vapor Density (Air=1): Not applicable (Pentane blowing agent – 2.5)

Physical State: Solid

pH: Not applicable

Vapor Pressure (mm Hg @ 20 o C): 400 mm Hg

Boiling Point: Not applicable

Odor: Slight hydrocarbon odor

Viscosity: Not applicable

Specific Gravity (Water=1): 1.05 to 1.18

Freezing Point: Not applicable

Solubility in Water: Very slight

Melting Point: Not determined

10. ECOLOGICAL INFORMATION

This material is not expected to cause harm to animals, plants or fish. Fish or animals may eat product and obstruct their digestive tract. It is not expected to harm ecosystems through its applied use.

11. REACTIVITY

General: This is a stable material; avoid sources of ignition.

Incompatible Materials and Conditions to Avoid: Reactive with oxidizing agents. Organic solvents, esters, amine and aldehydes will dissolve product. High temperature, poor ventilation combined with freshly expanded product may create hazardous, explosive or fire conditions.

Hazardous Decomposition Products: May decompose in a fire. See Section 5 of MSDS for combustion products statement.

Hazardous Polymerization: Will not occur.

12. TOXICOLOGICAL INFORMATION

This product has not been tested as a separate entity. Therefore, the hazards must be evaluated on the basis of the individual ingredients, and those hazards must be assumed to be additive in the absence of complete information. The hazards described in this document have been evaluated on a threshold of 1.0% for all hazardous ingredients and 0.1% for all carcinogens.

Acute Effects: Acute health effects from this product are unlikely when used as intended.

Chronic Effects: Chronic health effects from this product are unlikely when used as intended.

Styrene Monomer
In March 1987, the International Agency for Research on Cancer (IARC) reclassified styrene as possibly carcinogenic to human (Group 2B) due to "inadequate evidence in humans", "limited evidence in animals" and "other relevant data". Previously, styrene was classified as a Group 3 compound (not classified as to carcinogenicity to humans). The IARC working group determined that the weight of data on genetic and related effects, together with the consideration that styrene metabolized in humans and animals to styrene oxide for which there is sufficient evidence of carcinogenicity in experimental animals and has been classified by IARC as probably carcinogenic to humans (Group 2A), was sufficient reason to recommend the change in classification.

13. WASTE DISPOSAL CONSIDERATONS

RCRA Hazard Class: Non-hazardous

Waste Disposal: Incinerate, recycle or dispose in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.

14. TRANSPORTATION INFORMATION

US DOT Information: For domestic transportation purposes, this product is not regulated as a hazardous material by the US Department of Transportation (DOT) under Title 49 of the Code of Federal Regulations.

15. REGULATORY INFORMATION

Clean Air Act
This product contains styrene, which is listed as a hazardous air pollutant

SARA Title III Regulations
This product contains pentane and residual styrene monomer, which OSHA defines as a hazardous chemical. This product may be portable under SARA sections 311 and 312, depending on the maximum on-site storage volumes. This product does not contain any substance(s) subject to the reporting requirements (i.e., at or above de minimis quantities) of sections 302 and 304 of Title III of the Superfund Amendments and Reauthorization Act (SARA-40 CFR 355). This product does not contain any substance(s) subject to reporting requirements (i.e., at or above de minimis quantities) of sections 302 and 304 of Title III of the Superfund Amendments and Reauthorization Act (SARA-40 CFR 372).

Toxic Substance Control Act (TSCA)
All ingredients are listed on the TSCA inventory.

California Proposition 65
This material contains detectable amounts of some chemicals known to the State of California to cause cancer. Styrene oxide is listed as known to the State of California to cause cancer. Styrene oxide is a metabolite of styrene monomer.

Component Analysis: State
The following components appear on one or more of the following state hazardous substance lists:

Component	CAS #	CA	MA	MI	MN	NJ	PA
Pentane (Isomers)	109-66-0 78-78-4 287-92-3	a	a		a	a	a
Styrene	100-42-5	a	a	a	a	a	a

Component Analysis: WHMIS IDL
The following components appear on one or more of the following state hazardous substance lists:

Component	CAS #	Minimum Concentration
Pentane (Isomers)	109-66-0 78-78-4 287-92-3	1% English Item 1243; French Item 1348
Styrene	100-42-5	0.1% English Item 1473; French Item 1508

16. ADDITIONAL COMMENTS

Other Information
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.