SAFETY DATA SHEET

Roof Armor - Heat Shield, B Side
May 19, 2015

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID :	Roof Armor - Heat Shield, B Side		
Product Name :	Roof Armor - Heat Shield, B Side		
Revision Date :	May 19, 2015	**Date Printed :**	June 12, 2015
Version:	1.0	**Supersedes Date :**	N.A.
Manufacturer's Name :	General Coatings Manufacturing Corp.	**Distributed By/Distribué Par:**	Polysource Industries Inc.
Address :	1220 E. North Ave, Fresno, CA, US, 93725		#1 – 19725 Telegraph Trail
Emergency Phone :	Chemtrec:800-424-9300 (account:CCN9239) OR International: 703-5273887		Langley, BC, CAN, V1M 3E6
Information Phone :	(559) 495-4004		
Fax :	(559) 495-4009		

Product/Recommended Uses: For Further Information, Refer to the Product Technical Data Sheet.

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity - Repeated Exposure - Category 2

Skin Irritation - Category 2

Eye Irritation - Category 2B

Acute toxicity, Oral - Category 4

Pictograms:

Signal Word:

Warning

Hazardous Statements - Health:

H302 - Harmful if swallowed

H320 - Causes eye irritation

H315 - Causes skin irritation

H373 - May cause damage to organs through prolonged or repeated exposure.

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.

P270 - Do not eat, drink or smoke when using this product.

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

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response:

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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.

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.

P314 - Get Medical advice/attention if you feel unwell.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

P501 - Dispose of contents/ container to an approved waste disposal plant.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0000111-46-6	DIETHYLENE GLYCOL	11.0% - 21.0%
0052019-35-9	POLYMER WITH MANNICH BASE	10.0% - 19.0%
0000460-73-1	HFC-245FA	5.0% - 8.0%
0000098-94-2	DIMETHYLCYCLOHEXYLAMINE	1.3% - 2.2%
0000108-01-0	DIMETHYLETHANOLAMINE	1.3% - 2.2%
0000107-21-1	ETHYLENE GLYCOL	Trace

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: 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/feel unwell/concerned: Call a POISON CENTER/doctor.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use or discard.

IF exposed or concerned: Get medical advice/attention.

Eye Contact:

Avoid direct contact. Wear chemical protective gloves, if necessary.

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 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. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

IF exposed or concerned: Get medical advice/attention.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide 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.

Specific Hazards in Case of Fire:

Heated containers may build up pressure and rupture violently. Therefore, use cold water to cool fire-exposed containers.

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.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), googles, and full protective clothing are also required.

Care should always be exercised in dust/mist areas.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Do not touch or walk through spilled material.
Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.
If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

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 vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective 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:

Contain and absorb large spillages onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area clean with liquid decontaminate. Remove and properly dispose of residues. Notify applicable government authorities if release is reportable.

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, strong oxidizers and any 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.
Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them. Ground all structures, transfer containers and equipment to conform to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

Ideal storage temperature is 50-75°F.

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 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.

Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing.

Respiratory Protection:

If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied pressure supplied air respiratory with a full face piece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus.

Appropriate Engineering Controls:

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

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	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
ETHYLENE GLYCOL												
HFC-245FA		2.5			1							

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
ETHYLENE GLYCOL				C 100
HFC-245FA		2.5		

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	10.00 lb/gal
Specific Gravity	1.20
VOC Regulatory	0.00 lb/gal
VOC Part A & B Combined	N.A.
Appearance	Light Brown Liquid
Odor Threshold	N.A.
Odor Description	Slight Ethereal
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	149 °C
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	Heavier than air
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	15 °C

High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	N.A.
Evaporation Rate	Slower than ether
Coefficient Water/Oil	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Material is stable at standard temperature and pressure.

Conditions to Avoid:

Avoid high temperatures, heated material will build pressure and may rupture the container violently.

Hazardous Reactions/Polymerization:

Will not occur.

Incompatible Materials:

This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids, the reaction with water is slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds.

Hazardous Decomposition Products:

Highly unlikely under normal industrial use. Under extreme heat and fire, carbon monoxide, carbon dioxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Causes skin irritation

Serious Eye Damage/Irritation:

Causes eye irritation

Carcinogenicity:

No data available

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:

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

0000107-21-1 ETHYLENE GLYCOL

LD50 (oral, rat): 5.89 g/kg; 8.54 g/kg; 13.0 g/kg (5)
LD50 (oral, mouse): 7.5 g/kg; 15.28 g/kg (5,6)
LD50 (oral, guinea pig): 6.6 g/kg; 11.0 g/kg (5)
LD50 (oral, rabbit): 5.0 g/kg (5)
LD50 (dermal, rabbit): 9.5 g/kg (6)

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 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:

Not Regulated

IMDG Information:

Not Regulated

IATA Information:

Not Regulated

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000098-94-2	DIMETHYLCYCLOHEXYLAMINE	1.3% - 2.2%	SARA312,VOC,TSCA
0000107-21-1	ETHYLENE GLYCOL	0.0%	CERCLA,HAPS,SARA312,SARA313,VHAPS,VOC,TSCA
0000108-01-0	DIMETHYLETHANOLAMINE	1.3% - 2.2%	SARA312,VOC,TSCA
0000111-46-6	DIETHYLENE GLYCOL	11% - 21%	SARA312,VOC,TSCA
0000460-73-1	HFC-245FA	5% - 8%	SARA312,TSCA
0052019-35-9	POLYMER WITH MANNICH BASE	10% - 19%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

OTHER INFORMATION:

Note: As per GHS, category 1 is the greatest level of hazard within each class.

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.