Roof-Tek®
Technical Roofing Solutions, Inc.

Material Safety Data Sheet

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Numbers are available days, nights, weekends, & holidays.

SECTION 1 - PRODUCT INFORMATION

Part Number: 1812, 2012, 2512, 2712 Series (A, S, R, F, W & XW Reactivity's) Polyurethane Foam / B-Side
Common Chemical Name: Urethane System Resin Component
Synonyms: None
Molecular Formula: Mixture
Chemical Family: Not Applicable
Molecular Wt.: Not Established

SECTION 2 - INGREDIENTS

Chemical Name:	CAS No.	Amount	PEL/TLV
Diethylene Glycol (DEG)	111-46-6	< 10.0 %	Not Established
Ethylene Glycol (EG)	107-21-1	< 2.0 %	Ceiling 39.4 ppm 100MG/Cu.M
Flame Retardant	Proprietary	< 5.0 %	Not Established
Surfactant	Proprietary	< 1.0 %	Not Established
Catalyst	Proprietary	< 5.0 %	Not Established
Dichlorofluoroethane (Hcfc-141b)	1717-00-6	24.0 %	Not Established
Chlorodifluoromethane (R22)	75-45-6	1.0 %	ACGIH TLV TWA 1000 PPM
Polyol	Proprietary	>55.0 %	Not Established

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

Color: Amber
Form/Appearance: Liquid
Odor: Etherlike

Hazard Ratings:	Health	Fire	Reactivity	Protection
HMIS	2	1	1	X

The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects.

WARNING STATEMENT: CAUTION: Contains Diethylene Glycol (DEG)(CAS No. 111-46-6).
Contact with the eyes and skin may cause irritation. Acute over exposure to diethylene glycol can cause severe abdominal distress, CNS depression, and possible respiratory irritation. Chronic over expo-sure may cause liver and/or kidney damage
Contact with the eyes and skin may cause irritation. Inhalation may result in irritation.
If ingested, 1,4-butanediol is a depressant. Symptoms include deep narcosis, constriction of the pupils and loss of reflexes. Damage to the kidneys has also been reported after ingestion. Repeated exposure via oral gavage to rats has been known to produce mild to moderate liver inflammation. Developmental toxicity in the form of reduced fetal weights in the presence of maternal toxicity has been known to occur in mice.
Primary Routs of Exposure:

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

SECTION 3 - HAZARDS IDENTIFICATION (Cont.)

Acute Overexposure Effects:

Contact with dimethylaminoethanol may result in severe irritation. Burns and permanent injury may result. Contact with the eyes and skin may result in irritation. Acute ingestion overexposures to large doses of diethylene glycol (DEG) may produce nausea, vomiting, gastrointestinal cramping, CNS effects, diarrhea, liver necrosis, renal tubular degeneration and even death. Dimethylaminoethanol is extremely irritating to the skin and eyes. Direct contact with the liquid may be corrosive. Acute inhalation exposures at high concentrations have been known to produce respiratory difficulties, loss of coordination and decreased motor activity in rats. At levels above the PEL, the fluorocarbon component acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization. Inhalation of high concentrations of HCFC 141b can cause drowsiness, unconsciousness, headache, respiratory depression and death due to asphyxiation. Increased sensitivity of the heart to adrenalin; rapid heartbeat, irregular heartbeat and depressed cardiac function may also occur. Inhalation may result in respiratory irritation. Ingestion may result in gastric disturbances.

Chronic Overexposure Effects:

Chronic overexposures via ingestion may produce liver and kidney damage. DEG has been known to produce reproductive toxicity in experimental animals at very high gavage doses. Repeated skin contact with dimethylaminoethanol may result in sensitization. Repeated inhalation has been known to produce effects on the eyes and nasal mucous as well as respiratory and olfactory lesions in experimental animals.

The flame retardant contains an organophosphate that may cause nervous system disorders such as tremors and convulsions. Female rats exposed to 20,000 ppm during pregnancy exhibited maternal toxicity with reduction in litter size

and pup weight. There was no evidence of teratogenicity. A two-year inhalation study indicated that 141b demonstrated little toxicity; however, rats exposed to 5,000 ppm and 20,000 ppm developed benign testicular tumors late in the study.

SECTION 4 FIRST AID MEASURES

First Aid Procedures - Skin:
Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. Get immediate medical attention.

First Aid Procedures - Eyes:
Immediately rinse eyes with running water for 15 minutes. Get immediate medical attention.

First Aid Procedures - Ingestion:
If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:
Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:
The organophosphate contained in the flame retardant may inhibit cholinesterase; this inhibition may be treated with a combination of atropine and praladoxime. In treating persons suffering from toxic effects due to fluorocarbon compounds the use of epinephrine and similar drugs must be avoided because they produce cardiac arrhythmia.

First Aid Procedures - Aggravated Medical Conditions:
Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

First Aid Procedures - Special Precautions: None

SECTION 5 - FIRE FIGHTING MEASURES

	Typical	Low/High	Deg.	Method
Flash Point:	120 °C		C	Pensky-Martins Closed-C
Auto ignition:	Not Available			

(Flash Point of the Blowing Agent masks the end point.)

Extinguishing Media: Use water CO2 or dry chemical extinguishing media.

Fire Fighting Procedures: Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Unusual Hazards:
There are no known unusual fire or explosion hazards.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General: Spills should be contained, solidified and placed in suitable containers for disposal at a licensed facility.

SECTION 7 - STORAGE AND HANDLING

General: Store in a ventilated storage area between 70-80F. Avoid excessive temperatures, low or high. Avoid moisture.

SECTION 8 - PERSONAL PROTECTION

Clothing:
Gloves, coveralls, apron, boots as necessary to prevent skin contact.

Eyes:
Chemical goggles; also wear a face shield if splashing hazard exists.

Respiration:
Approved organic vapor mist respirator as necessary.

Ventilation:
Use local exhaust to control vapors/mists.

Explosion Proofing:
None required.

Other Personal Protection Data:
Avoid contact with skin as required by good normal hygiene practices.

SECTION 9 - PHYSICAL PROPERTIES

Color:	Amber		
Form/Appearance:	Viscous Liquid		
Odor:	Ether like		
Odor Intensity:	Slight		
	Typical	Low/High	UOM
Specific Gravity:	Not Available		
Bulk Density:	9.2		LB/GAL
Viscosity:	200-400 Centipoise		@ 20 Deg.
pH:	Basic		
Boiling Pt:	Not Available		
Freezing Pt:	< 0 °C		1 Atmosphere
Decomp. Temp:	Not Available		

Solubility in Water Description: Slightly Soluble

SECTION 10 - REACTIVITY DATA

Stability Data:

Stable

Incompatibility:

Avoid moisture to protect product quality.

Conditions/Hazards to Avoid:

Exposure to moisture and temperatures > 80°F.

Hazardous Decomposition/Polymerization:

Hazardous Decomposition Products: HCl, HF (From blowing agent), CO and CO2.

Corrosive Properties:

Not corrosive.

Oxidizer Properties:

Not an oxidizer

Other Reactivity Data:

None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

No applicable data for this section.

SECTION 12 - ECOLOGICAL INFORMATION

No applicable data for this section.

SECTION 13 - DISPOSAL CONSIDERATION

Waste Disposal:

Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.

Container Disposal:

Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Drums destined for a scrap dealer or landfill must be punctured or crushed to prevent reuse.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: N/A

Commodity Codes:	UN/NA Code:	E/R Guide:
	N/A	N/A

Bill of Lading Description:

Plastic Material O/T Expanded

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status

Listed on Inventory: YES

SARA - 313 Listed Chemicals:

Name: Dichlorofluoroethane (HCFC-141b)	CAS: 1717-00-6	Amount: 17.0 %
Name: Chlorodifluoromethane (R22)	CAS: 75-45-6	Amount: 1.0 %
Name: Ethylene Glycol (EG)	107-21-1	Amount< 2.0 %

RCRA Haz. Waste No.: N/A

CERCLA: Yes Reportable Qty.: (If Yes) 5,000 lbs.

This product may contain one or more chemicals known to the state of California to cause cancer, birth defects and/or other reproductive Harm.

SECTION 16 - OTHER INFORMATION

"Important: while the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by TRS, Inc. hereunder are given gratis and TRS, Inc. assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk". TRS, Inc. will not make its products available to customers for use in the manufacture of medical devices that are intended for permanent implantation in the human body or in permanent contact with internal bodily tissues or fluids. We at TRS, Inc. take pride in our products, and our tradition of developing innovative applications in partnership with our customers. However, the possibility of being required to respond to unfounded litigation and/or claims arising out of concerns relating to such use presents an unacceptable risk to the company.

END OF DATA SHEET