

MATERIAL DATA SHEETS POLYUREA

ExpandoThane

ExpandoThane is the first generation of Aromatic Polyurea to combine both the Waterproofing and chemical resistance of a Polyurea Instant set membrane with the addition of a micro blowing agent to create a Polyurea that expands between 5 to 7 times its original volume. Primary uses include but are not limited to: Complete seamless, self-flashing roofing systems as a standalone product or sprayed over most existing roof systems. On sloped visible Roof Applications an application of THpolymer 101 single component colored Aliphatic can be applied if special colors are desired. Foundation Waterproofing: ExpandoThane is self-priming and eliminates the need for bug hole fillers.

Physical Properties

Tensile Strength D412 1395

Elongation D412 300%

100% Modulus D412 1300

Tear Strength (PLI) D2240 162

Hardness (Shore D) D1737 30

Flexibility (1/8" Mandrel) D1737 85

Flashpoint (F) Pensky-Martin >200

Taper Abrasion (mg loss) CS18

Wheel

1kg per 1000 cycles 22

Hail Stone E822 Pass

Thermal Resistance Summer Flow R 2

ExpandoThane is to be applied by a Hot High Pressure Plural Component Machine

A – Side Temperature 120 Degrees F

B – Side Temperature 120 Degrees F

Hose Heat – 120 Degrees F

Pressure at Machine – 1500PSI

*Temperature degrees and pressure may need adjusting due to ambient temperature

MSDS

Spray Equipment and Coatings INC.

Expandothane A-Side Material Safety Data Sheet

SECTION 1 - MATERIAL IDENTIFICATION

Product Name: Expandothane A-side

Product Class: Polymeric MDI

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredient CAS # Weight % TLV

4,4'' - Diphenylmethane Disocyanate 101-68-8 50% 0.02 ppm

SECTION 3 - PHYSICAL DATA

BOILING POINT: Decomposes at 646°F, 341.1°C

SPECIFIC GRAVITY: 1.2

VAPOR PRESSURE: @ 20°C <0.0001

PERCENT VOLATILE: NA

VAPOR DENSITY: NA

EVAPORATION RATE: NA

APPEARANCE: light yellow liquid with faint odor

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 400°F, 204°C (COC)

EXTINGUISHING MEDIA: Dry chemical, foam, CO₂, halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should be equipped with self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Avoid water contamination in closed containers or confined area (carbon dioxide evolved)

SECTION 5 - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: See section 2

EFFECTS OF OVEREXPOSURE: Respiratory irritant-also causes respiratory sensitization with asthma like symptoms in exposed individuals. Skin and eye contact can cause irritation, reddening, swelling, rash, scaling, or blistering; ingestion - irritation or ulceration

EMERGENCY AND FIRST AID PROCEDURES: Eyes - Flush with water-obtain medical attention; Skin - wash with soap and water - clean contaminated clothing; Ingestion - do not induce vomiting, call physician and/or transport to emergency facility immediately; Inhalation - remove victim to fresh air, give oxygen – and call a physician.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Reaction with water forming carbon dioxide

INCOMPATIBILITY: This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis, and acids. The reaction with water is very slow under 50 degrees C, but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be violent.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, NO₂, NO, trace HCN

HAZARDOUS POLYMERIZATION: May occur. High temperatures in the presence of alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of CO₂ gas may rupture closed containers.

CONDITIONS TO AVOID: Moisture contamination.

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate and ventilate area, dike spill, prevent entry of water; clean up personnel wear full protective equipment. Absorb with sawdust and shovel into unsealed containers

WASTE DISPOSAL METHOD: Follow federal, state and local regulations. Incineration is the preferred method or material should be neutralized in accordance with state and local regulations.



SECTION 8 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Wear an NIOSH approved air supply

VENTILATION: As necessary to maintain below PEL

PROTECTIVE GLOVES: Rubber or PVC

EYE PROTECTION: Chemical goggles

OTHER PROTECTIVE EQUIPMENT: Use impervious protective clothing

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers tightly closed, store between 60 to 80F in a cool, dry place to protect from freezing

OTHER PRECAUTIONS: In case of Emergency contact Chemtrec 800/424-9300 begin_of_the_skype_highlighting 800/424-9300 end_of_the_skype_highlighting

SECTION 10 - ADDITIONAL REGULATORY INFORMATION

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710:

All ingredients are on the TSCA Chemical Substance Inventory.

SARA TITLE III SECTION 313:

This product contains the following toxic chemicals seduce to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of CFR 372:

CAS # Chemical Name Percent by Weight

101-68-8 Methylenebis 50% MDI PROP

65 (CARCINOGEN)

Warning: This product contains a chemical known to the state of California to cause cancer.

CAS # Chemical Name Percent by Weight

None

PROP 65 (TERATOGEN)

Warning: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

CAS # Chemical Name Percent by Weight None

TRANSPORTATION REGULATION: Not regulated

This information herein is given in good faith, but no warranty, expressed or implied, is made.

MSDS B Side

Expandothane B-Side Material Safety Data Sheet

SECTION 1: MATERIAL IDENTIFICATION

Product Name: Expandothane B-side

Product Class: Polymeric Polyol

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredient CAS # Weight % TLV



Di-(methylthio) toluenediamine 106264-79-3 15 Not Est. (1)
Polyoxypropylenglycol 9082-00-2 85 Not Est. (1)

SECTION 3 - PHYSICAL DATA

BOILING POINT: Not established
SPECIFIC GRAVITY: 1.05
VAPOR PRESSURE: Not established
SOL IN WATER: Soluble
APPEARANCE: Cloudy white liquid

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A LEL: NA UFL: NA
EXTINGUISHING MEDIA: Water fog, CO2, dry chemical, chemical foam
SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing, use water to cool containers to prevent spillage
UNUSUAL FIRE AND EXPLOSION HAZARDS: low hazard

SECTION 5 - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: See section 2
EFFECTS OF OVEREXPOSURE: Eyes: irritation, possible eye injury; inhalation: odor considered only annoying; skin: moderately irritating, can cause redness or drying of skin; ingestion: small amounts not likely to cause injury
EMERGENCY AND FIRST AID PROCEDURES: Eyes - Flush with water-obtain medical attention; Skin - wash with soap and water; Ingestion - induce vomiting, call physician.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Do not inhale smoke when burning and extreme high temperatures
INCOMPATIBILITY: alkali or alkaline earth metals, strong acids, copper, brass and elastomeric materials.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2, Nox; under fire conditions
HAZARDOUS POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: Isocyanates, oxidizing materials or strong acids

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spill, avoid personal contact, apply absorbent material (sawdust or inert dirt) or wipe up with suitable material, place in open container - wash area with detergent and water.
WASTE DISPOSAL METHOD: Because this is a petroleum base product, it may cause pollution - do not discharge into ground, streams, ponds or public water. Follow federal, state and local regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: None required
VENTILATION: No special requirements
PROTECTIVE GLOVES: Rubber or PVC
EYE PROTECTION: Chemical goggles
OTHER PROTECTIVE EQUIPMENT: none

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OTHER PRECAUTIONS: In case of Emergency contact Chemtrec 800/424-9300

TRANSPORTATION CLASSIFICATION: Not regulated

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