Manufacturer: POR-15 Inc., P.O. Box 1235, Morristown, NJ 07962-1235 Telephone: 973-887-1999

Factory: 64 South Jefferson Road, Whippany, NJ 07981

Emergency Telephone No: 973-887-1999, 800-457-6715, 973-539-3236, Chemtrec 800-424-9300

PRODUCT NAME: POR-15 FUEL TANK SEALER **FORMULA**: Mixture
CHEMICAL NAME: Isocyanate Prepolymer based on MDI **T.S.C.A. STATUS:** OK
CHEMICAL FAMILY: Solution Aromatic Isocyanates (26447-40-5) **TRADE NAMES/SYNONYMS:** Gas Tank Sealer, Fuel Tank Sealer

II. HAZARDOUS INGREDIENTS

Diphenylmethane Diisocyantate (MDI) (26447-40-5)%: ca 6 Current TLV: ACGIH: 0.02 ppm (0.2 mg/m^3)
Naptha Petroleum (64742-94-5) Ceiling Value OSHA (PEL): Same
Aluminum (7429-90-5)

III. PHYSICAL DATA

BOILING POINT: Not established. SPECIFIC GRAVITY: (Water = 1) 1.4
VAPOR PRESSURE: 1.4 X 104mm Hg @ 25 degrees C (MDI) % VOLATILE BY VOLUME: 26%
VAPOR DENSITY: (Air = 1) 4.1 EVAPORATION RATE (Ether = 1): For Solvent, 0.2
SOLUBILITY IN WATER: Nil COLOR: Light gray
ODOR: Slightly Aromatic LBS. PER GALLON: 8.9
VISCOSITY: Range @ 77^o F/25^o C: 200-500 CPS VOLATILE ORGANICS: 2.23 grams per liter

IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT (Method used): TCC 150 Degrees F
EXTINGUISHING MEDIA: Dry chemical (e.g. monoammonium phosphate, potassium sulfate, and potassium chloride, carbon dioxide, high expansion (proteninic) chemical foam, water (cold) spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES/USUAL FIRE OR EXPLOSION HAZARDS: Self-contained breathing apparatus should be worn by firefighters. During a fire, MDI vapors and other irritating, toxic gases may be generated by thermal decomposition (see section VIII). At temperatures greater than 400 degrees F (204 degrees C), polymeric MDI can polymerize and decompose. Use cold water to cool fire-exposed containers.

HAZARD CLASS: B HEALTH: 3 FIRE: 2 REACTIVITY: 1 FLAMMABLE LIMITS LEL: 1% FLAMMABLE LIMITS UEL: 7.1%

V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: For isocyanates, 0.02 ppm; for solvent, 200 ppm

EFFECTS OF OVEREXPOSURE: Eyes-severe irritation; tearing skin, discoloration-drying; breathing-irritation, dizziness, unconsciousness (for solvent). For isocyanates, coughing, irritation of mucous membranes and respiratory tract.

SKIN EFFECTS: Slight to moderate irritation (MDI); skin sensitizer in guinea pigs (MDI). No conclusive evidence has been developed to indicate that MDI or POR-15 FTS is carcinogenic, teratogenic or that either one causes reproductive effects in animals or humans. MDI has been reported by NIOSH to be mutagenic to Salmonella Typhimurium bacteria in the presence of a mammalian liver activation system. There is not full agreement in the scientific community on the significance of these Ames test results and their relationship to human safety in assessing the risk of cancer in man. A commitment has been made to perform an animal lifetime inhalation study on polymeric MDI.

HUMAN EFFECTS OF OVEREXPOSURE: INHALATION – Inhalation of MDI vapors or aerosols in concentrations above 0.02ppm can produce irritation of the mucous membranes in the respiratory tract, running nose, sore throat, productive cough and a reduction of lung function. Extensive exposures to concentrations well above the TLV could lead to bronchitis, bronchial spasm and pulmonary edema. These effects are usually reversible. However, due to low volatility, high exposures are not anticipated except if the material is overheated or sprayed as an aerosol into the air. Hypersensitivity pneumonitis has also been reported. Another type of response is hyper reactivity or hyper sensitization. Persons with a preexisting unspecific bronchial hyper reactivity or persons with a specific isocyanate hypersensitivity (as a result of previous repeated overexposure or a single large dosage) will respond to small isocyanate concentrations at levels well below the TLV level of 0.02ppm. Symptoms could be an immediate or delayed and include chest tightness, respiratory distress or asthmatic attack**. SKIN:** Polymeric MDI reacts with skin protein and tissue moisture and can cause localized irritation as well as discoloration. Prolonged contact could produce reddening, swelling, or blistering and, in some individuals, skin sensitization resulting in dermatitis. **EYES:** Liquid, vapors, or aerosols are irritating to the eyes and can cause lachrymation (tearing effect). Corneal damage can occur, however, indications are that the damage is reversible and does not result in permanent injury. **INGESTION:** Ingestion could result in

irritation and some corrosive action in the mouth, stomach tissue and digestive tract. However, it is not considered a common occupational route of exposure.

VI. EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Flush with clean, lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids; obtain medical attention. **SKIN CONTACT:** Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing before re-use. **INHALATION:** Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. **INGESTION:** Do not induce vomiting. Give 250 ml of milk or water to drink. **DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSIOUS PERSON.** Consult physician.

VII. PROTECTION RECOMMENDATIONS

EYE PROTECTION: Safety glasses with side shields, splash goggles or face shield. Contact lenses should not be worn. **SKIN PROTECTION:** Chemical-resistant gloves. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered to a minimum. **RESPIRATORY PROTECTION:** Use respirator that is recommended or approved for use in isocyanate containing environments (air purifying or fresh air supplied). Consider type of application and environmental concentrations. In spray applications you must protect against exposure to both vapor and spray mist. An air-supplied respirator is strongly recommended for spray application. Observe OSHA regulations for respirator use 29 CFR, 1910.134. **VENTILATION:** Ventilation as required to maintain air concentrations below TLV''s. If material is spray-applied, ventilation should be provided and air supplied respirators worn. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

VIII. REACTIVITY DATA

STABILITY: Stable under normal conditions. **POLYMERIZATION:** None under normal conditions. **CONDITIONS TO AVOID:** Temperatures below 32 degrees F (0^{o}C) or above 122 degrees F (50^{o}C). **incompatability (materials to avoid)**: Avoid contact with water, alcohols, amines, strong bases, metal compounds or surface-active materials. **HAZARDOUS DECOMPOSITION PRODUCTS:** By fire, carbon dioxide, CO, oxides of nitrogen, traces of HCN, MDI.

IX. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate source of ignition of vapors, wear protective clothing while cleaning up; absorb on sand, clay, or absorbent material. **WASTE DISPOSAL METHOD:** Disposal of in accordance with local, state, and federal regulations. Incineration is preferred. Decontaminate empty containers.

X. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA approved respirator. **EYE PROTECTION:** Goggles or facemask. **VENTILATION:** Use in well-ventilated areas only. Have adequate general exhaust. **PROTECTIVE GLOVES:** Solvent protective gloves. **OTHER PROTECTIVE EQUIPMENT:** Self-contained breathing apparatus if threshold limit is exceeded.

XI. SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE: (min/max): 32 degrees F (0 degrees C)/122 degrees F (50 degrees C).

AVERAGE SHELF LIFE: 6 months to 2 years (unopened can) @ 77 degrees F (25 degrees C).

SPECIAL SENSITIVITY: (heat, light, moisture) If container is exposed to high heat, container may pressurize slightly. If container is opened and used as supply can, do not re-seal can as pressure may build up due to reaction producing carbon dioxide, which might cause re-sealed container to pressurize and burst. Do not re-seal if moisture contamination is suspected or if can has been open for more than a few minutes.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly closed container and protect from moisture and foreign materials. At maximum storage temperatures noted, material may slowly polymerize without hazard. Ideal storage temperature range is 35-818 degrees F (2-30 degrees C).