
SECTION 1: IDENTIFICATION

Catalogue No. (N/A)

Product Name: **POR-15 Fuel Tank Sealer**
Manufacturer Name: POR-15, Inc.
General Use: Sealer
Product Description: Isocyanate Prepolymer based on MDI

Address: Unit 1 / 4 Prosperity Parade
Warriewood, NSW 2102
Australia

Email: sales@ppcco.com.au

Business Phone: (02) 9999 0122

Business Fax: (02) 9999 0394

Emergency Phone:

For information

Emergency number - Australia 131 126

For emergencies outside US, call INTERNATIONAL: (703)527-3887

Manufacturer MSDS Revision Date: 01.01.2013

Trade Names: Gas Tank Sealer, Fuel Tank Sealant

Chemical Family: Solution Aromatic Isocyanates

NFPA

Health: 3
Flammability: 2
Reactivity: 1
Other:

HMIS

Health Hazard: 3
Fire Hazard: 2
Reactivity: 1
Personal Protection:

Physical Description / Properties

Physical State/Appearance: Liquid
Colour: Light grey colour
Odour: Slightly Aromatic
Vapour Pressure: 0.00014 mm Hg at 25°C (MDI)
Vapour Density: 4.1 (Air = 1)
Flash Point: 65.6°C (150°F)
Upper Explosive Limit: 7.1%
Lower Explosive Limit: 1%
Boiling Point: Not established
Solubility: Nil In Water
Specific Gravity: 1.4 (Water = 1)
Density: 8.9 pounds/gallon
Evaporation Point: For solvent: 0.2 (Ether = 1)

Percent Volatile:	26% By Volume
Volatile Organic Compound Content:	2.23 grams per litre
Viscosity:	200-500 CPS @ 25°C (77°F)
Molecular Formula:	Mixture
Molecular Weight:	Varies

Ingredients

Chemical Name	CAS#	Lower Percent	Upper Percent
Diphenylmethane Diisocyanate (MDI)	26447-40-5		
Naptha Petroleum	64742-94-5		
Aluminum	7429-90-5		

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SECTION 2 : HEALTH HAZARD INFORMATION

Catalogue No.: (N/A)

Health Effects

Emergency Overview: Hazardous according to criteria of Work safe Australia

Applies to All Ingredients:

Potential Health Effects: Eyes: irritation; tearing skin, discoloration: drying; breathing: irritation, dizziness (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 evidence has been developed to indicate that MDI or POR-15 FTS is carcinogenic, teratogenic or that either one cause's 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 any risk of cancer in man. A commitment has been made to perform an animal life-time inhalation study on polymeric MDI.

Eye Contact: HUMAN EFFECTS OF OVEREXPOSURE:
EYES: Liquid vapours, 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.

Skin Contact: HUMAN EFFECTS OF OVEREXPOSURE:
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.

Inhalation: HUMAN EFFECTS OF OVEREXPOSURE:
Inhalation of MDI vapours or aerosols in concentrations above 0.02 ppm 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 hypersensitization. Persons with a pre-existing unspecific bronchial hyper reactivity or persons with 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 of 0.02 ppm. Symptoms could be immediate or delayed and include chest tightness, respiratory distress or asthmatic attack.

Ingestion:

HUMAN EFFECTS OF OVEREXPOSURE:

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.

THRESHOLD LIMIT VALUE:

For isocyanates: 0.02 ppm

For solvent: 200 ppm

First Aid

Eye Contact:	Immediately flush eyes with plenty of water for 15 to 20 minutes occasionally lifting eyelids. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash contaminated clothing thoroughly before re-use.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if necessary. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. Give 250 ml of milk or water to drink. Consult physician.

Diphenylmethane Diisocyanate (MDI) :

Naptha Petroleum :

Aluminum :

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SECTION 3 : PRECAUTIONS FOR USE

Catalogue No.: (N/A)

Engineering Controls / Personal Protection / Flammability

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Ventilation System:	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.
Personal Protective Equipment Routine Handling:	SPECIAL PROTECTION INFORMATION: RESPIRATORY PROTECTION: NIOSH/MSHA approved respirator. EYE PROTECTION: Goggles or face mask. 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. A
Skin Protection Description:	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.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for

permeability data.	
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166. Contact lenses should not be worn.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapour cartridge or canister approved for use in isocyanate containing environments may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. In spray applications you must protect against exposure to both vapour and spray mist. An air-supplied respirator is strongly recommended for spray application. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Eyewash and deluge shower should be available.

Exposure Standards

Ingredient Guidelines

Ingredient: Aluminum

Guideline Type:	OSHA PEL-TWA
Guideline Information:	5 mg/m3
Guideline Type:	ACGIH TLV-TWA
Guideline Type:	Australian Exposure Standard

Ingredient: Diphenylmethane Diisocyanate (MDI)

Guideline Type:	Australian Exposure Standard
Guideline Information:	Not Established
Guideline Type:	ACGIH TLV-TWA
Guideline Information:	Not Established
Guideline Type:	OSHA PEL-TWA
Guideline Information:	Not Established

Ingredient: Naptha Petroleum

Guideline Type:	OSHA PEL-TWA
Guideline Type:	ACGIH TLV-TWA
Guideline Type:	Australian Exposure Standard

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SECTION 4 : SAFE HANDLING INFORMATION

Catalogue No.: (N/A)

Storage And Transport

Storage:	STORAGE TEMPERATURE (min/max): 32 deg F (0 deg C)/122 deg F (50 deg C) AVERAGE SHELF LIFE: 6 months to 2 years (unopened can) @ 77 deg F (25 deg C) SPECIAL SENSITIVITY (heat, light, moisture): If container is exposed to high continuous heat, container may pressurize slightly. If moisture enters container, pressure can build up due to cure reaction producing carbon dioxide, which could 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. 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 35-85 deg F (2-30 deg C)
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Temperatures below 0°C (32°F) or above 50°C (122°F).
Incompatibilities with Other	Avoid contact with water, alcohols, amines, strong bases, metal compounds or

Materials:	surface active materials.
Hazardous Polymerization:	None under normal conditions.
Hazardous Decomposition Products:	By fire, carbon dioxide, CO, oxides of nitrogen, traces of HCN, MDI.
DOT Shipping Name:	Non-Regulated
DOT Hazard Class:	Non-Regulated

Spills And Disposal

Spill Cleanup Measures:	Eliminate source of ignition of vapours, wear protective clothing while cleaning up; absorb on sand, clay, or absorbent material.
Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drums prior to offering for recycle.

Fire / Explosion Hazard

Fire:	Combustible liquid. At elevated temperatures, vapours can form an ignitable mixture with air. Vapours can flow along surfaces to distant ignition sources and flash back.
Flash Point:	65.6°C (150°F)
Flash Point Method:	TCC
Upper Flammable or Explosive Limit:	7.1%
Lower Flammable or Explosive Limit:	1%
Extinguishing Media:	Dry chemical (e.g. monoammonium phosphate, potassium sulphate, and potassium chloride), carbon dioxide, high expansion (proteinic) chemical foam, sand.
Fire Fighting Instructions:	Use cold water to cool fire-exposed containers.
Protective Equipment:	As in any fire wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
NFPA	
Health: 3	Flammability: 2
Reactivity: 1	Other:
Unusual Fire Hazards:	During a fire, MDI vapours and other irritating, toxic gases may be generated by thermal decomposition, as with all paints (see section 7). At temperatures greater than 400 deg F (204 deg C), polymeric MDI can polymerize and decompose. HAZARD CLASS: B

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OTHER INFORMATION

Catalogue No.: (N/A)

Applies to All Ingredients :

TSCA 8(b): Inventory Status: T.S.C.A. STATUS: Ok

Diphenylmethane Diisocyanate (MDI) :

Naptha Petroleum :

Aluminum :

HMIS:

Health Hazard:	3
Fire Hazard:	2
Reactivity:	1

NFPA:

Health:	3
Fire Hazard:	2
Reactivity:	1

MSDS Revision Date: 01.01.2013

Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet. We welcome any additional information about our products that customers have obtained by personal experience.

References:

1. American Chemical Society, STN Easy Online Database
2. Brethericks Reactive Chemical Hazards Database. Version 2.
3. Gassarett and Doulls Toxicology, The Basic Science of Poisons.
4. Hawleys Condensed Chemical Dictionary, Thirteenth Edition
5. IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, WHO International Research on Cancer.
6. Industrial Hygiene and Toxicology, by F.A. Patty.
7. National Library of Medicine, Department of Health and Human Services, Hazardous Substances Data Bank (HSDB).
8. National Toxicology Program (NTP) Eighth Report on Carcinogens, 1997.
9. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) and Pocket Guide to Chemical Hazards.
10. OSHA Hazard Communication Standard, 1910.1200 and Z Tables.
11. Sax Dangerous Properties of Industrial Materials. Tenth Edition.
12. The Merck Index: An Encyclopedia of Chemicals and Drugs. Merck and Company. Twelfth Edition 1998.
13. Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment and Biological Exposure Indices. TLV Booklet, 2001.