

**SECTION 1: IDENTIFICATION**

Catalog No. (N/A)

Product Name: **POR-15 Rust Preventive Paint**  
 Manufacturer Name: POR-15, Inc.  
 General Use: Paint  
 Product Description: Isocyanate Prepolymer based on MDI

Address: P.O. Box 1235  
 Morristown NJ 07962-1235

Email: support@por15.com

Business Phone: (800) 457-6715

Business Fax: (973) 887-8007

Emergency Phone: (973)-887-1999

For information

in North America, call: (800) 457-6715

**CHEMTREC Numbers:**

**For emergencies in the US, call CHEMTREC: 800-424-9300**

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

Manufacturer MSDS Revision 07/02/2008

Date:

Trade Names: POR-15 Rust Paint, POR-15 Paint

Chemical Family: Solution Aromatic Isocyanates

NFPA

Health: 3

Flammability: 2

Reactivity: 1

Other:

**Physical Description / Properties**

Physical State/Appearance: Liquid  
 Color: Black, Silver, Clear (light brown trans)  
 Odor: Aromatic  
 Vapor Pressure: 38 mm Hg  
 Vapor Density: 4.5 (Air = 1)  
 Flash Point: 40°C (104°F)  
 Upper Explosive Limit: 7.1%  
 Lower Explosive Limit: 1%  
 Boiling Point: 111°C (232°F)  
 Solubility: Nil In Water  
 Specific Gravity: 1.6 (Water = 1)  
 Density: 8.9 pounds/gallon  
 Evaporation Point: For solvent: 4.5 (Ether = 1)  
 Percent Volatile: 26% By Volume  
 Volatile Organic Compound Content: For POR-15 Clear: 236 grams per liter  
 For POR-15 Silver & Black: 223 grams per liter  
 Viscosity: 200-500 CPS @ 25°C (77°F)  
 Molecular Formula: Mixture  
 Molecular Weight: Varies

## Ingredients

Chemical Name	CAS#	Lower Percent	Upper Percent
Naptha Petroleum	68333-23-3	25	35
Diphenylmethane Diisocyanate (MDI)	26447-40-5	50	70
Non-hazardous proprietary ingredients		10	22
Various catalysts		5	10

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## SECTION 2 : HEALTH HAZARD INFORMATION

Catalog No.: (N/A)

### Health Effects

**Emergency Overview:** Hazardous according to criteria of Worksafe Australia

**Applies to All Ingredients:**

**Potential Health Effects:** 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 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 life-time inhalation study on polymeric MDI.

**Eye Contact:** HUMAN EFFECTS OF OVEREXPOSURE:  
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.

**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 vapors 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 hyperreactivity or hypersensitization. Persons with a preexisting unspecific bronchial hyperreactivity 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 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**

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- 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 center immediately. Never give anything by mouth to an unconscious person. Give 250 ml of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

**Diphenylmethane Diisocyanate (MDI) :**  
**Naptha Petroleum :**

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**SECTION 3 : PRECAUTIONS FOR USE**

Catalog No.: (N/A)

**Engineering Controls / Personal Protection / Flammability**

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- 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 exposure standards. 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.
- 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 vapor 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 vapor 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:** Diphenylmethane Diisocyanate (MDI)

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

Catalog 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 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.

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 50-81 deg F (10-27 deg C).

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** Temperatures below 0°C (32°F) or above 50°C (122°F). To maintain freshness: Avoid contact with water, alcohols, amines, strong bases, metal compounds or surface active materials.

**Hazardous Polymerization:** Will not occur in unopened cans under normal conditions.

**Hazardous Decomposition Products:** (Typical of all paints): By fire, carbon dioxide, CO, oxides of nitrogen, traces of HCN, MDI., and elements unknown.

**DOT Shipping Name:** Paint

**DOT UN Number:** UN1263

**DOT Hazard Class:** 3

**DOT Packing Group:** III

## Spills And Disposal

<b>Spill Cleanup Measures:</b>	Eliminate source of ignition of vapors, wear protective clothing while cleaning up; absorb on sand, clay, or absorbent material.
<b>Waste Disposal:</b>	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. Incineration is preferred. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drum prior to offering for recycle.

## Fire / Explosion Hazard

<b>Fire:</b>	Combustible liquid. At elevated temperatures, vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.
<b>Flash Point:</b>	40°C (104°F)
<b>Flash Point Method:</b>	TCC
<b>Upper Flammable or Explosive Limit:</b>	7.1%
<b>Lower Flammable or Explosive Limit:</b>	1%
<b>Flammability Class:</b>	1B
<b>Extinguishing Media:</b>	Dry chemical (e.g. monoammonium phosphate, potassium sulfate, and potassium chloride), carbon dioxide, high expansion (proteinic) chemical foam, sand.
<b>Fire Fighting Instructions:</b>	Use cold water to cool fire-exposed containers.
<b>Protective Equipment:</b>	As in any fire wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>NFPA</b>	
<b>Health: 3</b>	<b>Flammability:2</b>
<b>Reactivity:1</b>	<b>Other:</b>
<b>Unusual Fire Hazards:</b>	During a fire, MDI vapors and other irritating, toxic gases may be generated by thermal decomposition (see section 7). At temperatures greater than 400 deg F (204 deg C), polymeric MDI can polymerize and decompose.

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## OTHER INFORMATION

Catalog No.: (N/A)

<b>Ecotoxicity:</b>	No information found for Product.
<b>Environmental Fate:</b>	No information found for Product.

### Diphenylmethane Diisocyanate (MDI) :

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

### Naptha Petroleum :

**NFPA:**

Health: 3  
Fire Hazard: 2  
Reactivity: 1

MSDS Revision Date: 07/02/2008

**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 a 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.

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