

MATERIAL SAFETY DATA SHEET

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PARSON PERMA SEAL
TRADE NAME: PARSON GROUT
MANUFACTURED BY: Parson Environmental Products, Inc.
PO Box 4474
Reading, PA 19606

EMERGENCY PHONE: 610-582-6060
INFORMATION PHONE: 800-356-9023

INFOTRAC (800) 535-5053. This number is to be used only in the event of chemical emergencies involving a spill, leak, fire exposure, or accident involving chemicals.

SECTION II

COMPOSITION/INFORMATION ON INGREDIENTS

| INGREDIENT NAME | WT % | CAS # |
|--------------------------------------------|---------|------------|
| MDI Prepolymer | 30 - 60 | -- |
| Methylene Bisphenyl Isocyanate | <10 | 101-68-8 |
| Diphenylmethane Diisocyanate Mixed Isomers | <10 | 26447-40-5 |
| 1, 3-Dioxolan-2-one, 4-methyl- | 25 - 45 | 108-32-7 |

SECTION III

HAZARDS IDENTIFICATION

Emergency Overview

Physical Appearance: Brown liquid.

Immediate Concerns: Irritating to eyes, respiratory system, and skin. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization and risk of serious damage to respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons.

Potential Health Effects

Eyes: Liquids, vapors, or mists are irritating to the eyes and can cause stinging, burning, lachrymation or tearing.

Skin: Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization.

Ingestion: Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy, or diarrhea.

Inhalation: Inhalation of vapors or mist at concentrations above the TLV can cause respiratory tract irritation. (Nose, throat, lungs.) Chronic inhalation can result in sensitization.

Signs and Symptoms of Overexposure

Eyes: Contact may cause moderate irritation consisting of transient redness, swelling, and mucous membrane discharge to the conjunctiva. Prolonged contact with the eyes may cause reversible corneal opacity to occur, with no visual impairment expected.

Skin: Contact may cause minor irritation consisting of transient redness and/or swelling. Individuals with skin sensitization can develop these symptoms from contact with a small amount of liquid or vapors.

Ingestion: Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy or diarrhea.

Inhalation: Vapors or mist, especially as generated from heating the material or as from exposure in poorly ventilated areas or confined spaces, are irritating and cause nasal discharge, coughing, discomfort in nose and throat, and breathing obstruction. Individuals with respiratory sensitization may experience allergic respiratory reactions when exposed to amounts below the exposure guidelines.

Medical Conditions Aggravated: Asthma, other respiratory disorders (bronchitis, emphysema, bronchia hyperreactivity), skin allergies, eczema.

Routes of Entry: Inhalation, skin contact, eye contact, ingestion.

Sensitization: Any individual with isocyanate sensitization should not be exposed to this product. These individuals can react to exposure well below the TLV. Symptoms can occur immediately or several hours after exposure.

SECTION IV**FIRST AID MEASURES**

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

Skin: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash clothing thoroughly before reuse. For severe exposure, seek medical attention immediately. For lesser exposure, seek medical attention if swelling or redness occurs, or if irritation persists after being washed.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If the individual is conscious, rinse mouth with water. Give 1 to 2 cups of water to drink. Seek immediate medical attention.

Inhalation: Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breathing has ceased or shows signs of failing. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours.

Antidotes: No specific antidote.

NOTES TO PHYSICIAN: Symptomatic and supportive therapy as needed. Following severe exposure, medical follow-up should be monitored for at least 48 hours. May cause respiratory sensitization or asthma-like symptoms. Respiratory symptoms, including pulmonary edema, may be delayed.

SECTION V**FIRE FIGHTING MEASURES**

Flash Point and Method: >(200°F) Closed Cup

Extinguishing Media: Dry Chemical, Carbon Dioxide, Chemical Foam, Water Fog or spray.

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, and HCN.

Explosion Hazards: Closed containers could rupture explosively at elevated temperatures generated under fire conditions. During a fire, gases of a highly toxic nature may be generated by thermal decomposition or combustion. Use water to cool fire-exposed containers.

Fire Fighting Procedures: Isolate fuel supply from fire. Use water spray to cool fire-exposed surfaces and containers. Fire fighters should wear self-contained breathing apparatus in addition to emergency fire fighting protective clothing.

Comments: Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures.

SECTION VI**ACCIDENTAL RELEASE MEASURES**

Small Spill: Clean up spills wearing proper personal protective equipment. (See Section VIII) Absorb with dry chemical absorbent, earth, sand, or any other inert material. Place in a chemical waste container. Move to outside well-ventilated area. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered 48 hours before disposal. Clean spill area with decontamination solution and allow to stand for 15 minutes before removal.

Large Spill: Eliminate all ignition sources. Evacuate and ventilate the area. Create a dike or trench to contain materials. Prevent entry into waterways, sewers, basements or confined areas. Clean-up personnel should wear appropriate personal protection equipment (see Section VIII). Absorb with dry chemical absorbent, earth, sand, or any other inert material. Do not use combustible material such as sawdust. Place in a chemical waste container. Move to outside well-ventilated area. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered 48 hours before disposal. Clean spill area with decontamination solution and allow to stand for 15 minutes before removal. Test atmosphere for MDI.

General Procedures: Decontamination solution: concentrated ammonia (5%), detergent (2%), and water (93%).

Release Notes: Spills and releases may have to be reported to Federal and/or local authorities. See section XV regarding reporting requirements.

Comments: Dispose of by any standard method of disposal in accordance with good industrial practice and in compliance with federal, state, and local environmental protection regulations.

SECTION VII**HANDLING AND STORAGE**

Precautions: Keep containers tightly sealed. Keep containers away from heat source and/or open flames. Do not store containers in open sunlight. Store in cool, well-ventilated area.

Handling: Wear proper personal protective equipment. Use in a well ventilated area. Avoid smoking, bare lights, or ignition sources. Keep containers securely sealed when not in use. Avoid physical damage to containers.

SECTION VII (CONTINUED)**HANDLING AND STORAGE**

Storage: Containers can rupture if exposed to high heat. Protect from atmospheric moisture. Keep containers sealed in order to avoid contamination. Do not reseal if contaminated. After container has been opened, blanket with nitrogen before resealing. Store indoors in a cool, well-ventilated area.

Storage Temperature: (55°F) minimum to (120°F) maximum

Shelf Life: 6 months.

SECTION VIII**EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines: OSHA Hazardous Components (29 CFR 1910.1200)**

| | | Exposure Limits | | ACGIH TLV | |
|--------------------------------------------|-----|-----------------|-------------------|-----------|-------------------|
| | | OSHA PEL ppm | mg/m ³ | ppm | mg/m ³ |
| MDI Prepolymer | TWA | NE | | NE | |
| Methylene Bisphenyl Isocyanate | TWA | 0.2 | | 0.05 | |
| Diphenylmethane Diisocyanate Mixed Isomers | TWA | NE | | NE | |
| 1,3-Dioxolan-2-one, 4-methyl- | TWA | NE | | NE | |

OSHA Table Comments: NE = Not established

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal Protective Equipment

Eyes and Face: Wear safety glasses with side shields (or goggles) and a face shield.

Skin: The following protective materials are recommended: Gloves – neoprene, nitrile rubber, butyl rubber. Thin latex disposable gloves should be avoided for repeated or long-term use. Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACHIH.

Respiratory: During application, if exposure of product can exceed the PEL/TLV, use appropriate respiratory protection to protect from overexposure. Appropriate respiratory protection includes approved supplied-air respirators (SAR) operated in a positive pressure mode or, in non-IDLH atmospheres, NIOSH approved air purifying respirators (APR), provided an appropriate cartridge change-out schedule is implemented. [29 CFR 1910.134 (d)(3)(iii)] All respirators used should follow the OSHA Respiratory Standard 29 CFR 1910.134.

Protective Clothing: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

Work Hygienic Practices: Follow good normal hygiene practices. Avoid contact with skin. Avoid eating, drinking, or smoking while using this product.

Other Use Precautions: Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Persons with respiratory problems including asthmatic-type conditions, chronic bronchitis, or other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated for their suitability of working with this product. Once a person is diagnosed as sensitized, no further exposure of the material that caused the sensitization should be permitted. The Occupational Exposure limits do not apply to previously sensitized individuals.

Comments: Other Protective Equipment: Safety showers and eye wash stations.

SECTION IX**PHYSICAL AND CHEMICAL PROPERTIES**

| | |
|----------------------|----------------------------------|
| Physical State: | Liquid |
| Color: | Brown |
| Odor: | Slightly musty |
| Boiling Point: | Not Determined |
| Freezing Point: | Not Determined |
| Specific Gravity: | 1.15 to 1.17 (water=1) at (77°F) |
| Solubility in Water: | Insoluble |
| Viscosity: | 350 to 550 cps at (77°F) |

SECTION X

STABILITY AND REACTIVITY

Conditions to Avoid: Temperature extremes. Container contamination. Moisture.

Stability: Stable under recommended storage conditions

Polymerization: Polymerization may occur at elevated temperatures in the presence of alkalies, tertiary amines, and metal compounds.

Hazardous Decomposition Products: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, and HCN.

Incompatible materials: This product will react with any materials containing active hydrogens such as water, alcohol, amines, bases and acids. The reaction with water is very slow under 122° F, but is accelerated at higher temperatures.

SECTION XI

TOXICOLOGICAL INFORMATION

Acute: Dermal LD₅₀: >5000 mg/kg (rabbit) **Oral LD₅₀:** >3200 mg/kg (rat)

Eye Effects: The vapor, aerosol, and liquid are irritant.

Skin Effects: Moderate Irritant. Repeated and/or prolonged contact may cause skin sensitization. There is limited evidence from animal studies that skin contact may play a role in respiratory sensitization. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Mutagenicity: There is no substantial evidence of mutagenic potential.

Reproductive Effects: No adverse reproductive effects are anticipated.

General Comments: A study was conducted where groups of rats were exposed for 6 hours/day, two days/week for a lifetime to atmospheres of respirable polymeric MDI aerosol at concentrations of 0, 0.2, 1, or 6 mg/m³. No adverse effects were observed at 0.2 mg/m³. At the 1 mg/m³ concentration, minimal nasal and lung irritant effects were seen. Only at the top concentration (6.0 mg/m³) was there an increased incidence of a benign tumor of the lungs (adenoma). One malignant pulmonary tumor (adenocarcinoma) was seen in the 6.0 mg/m³ group. MDI administration to rats in this study did not change the distribution and incidence of tumors from those seen in control animals. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

SECTION XII

ECOLOGICAL INFORMATION

Ecotoxicological Information: Polymeric MDI. LC50 (Zebra Fish) >1000 mg/L. EC50 (Daphnia magna) (24 hour) >1000 mg/L. EC50 (E. Coli) >100 mg/L.

Chemical Fate Information: Immiscible with water, but will react with water to produce inert and non-biodegradable solids.

SECTION XIII

DISPOSAL CONSIDERATIONS

Disposal Method: Disposal should be in accordance with local, state, provincial or national regulations.

Empty Container: Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

RCRA Hazard Class: This material is not a hazardous waste under RCRA 40 CFR 261. The treated waste is not a hazardous material under RCRA 40 CFR 261.

General Comments: The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

SECTION XIV

TRANSPORT INFORMATION

DOT (Department of Transportation)

Proper Shipping Name: Not restricted when shipped below RQ.

Technical Name: Compound Resin

Other Shipping Information: Single containers less than 5,000 lbs are not regulated. Single containers with 5,000 lbs or more of 4,4'-Methylene Diphenyl Diisocyanate are regulated as: Other Regulated Substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate), 9, NA3082, PGIII, RQ.

AIR (ICAO/IATA) - Proper Shipping Name: Not restricted

Vessel (IMO/IMDG) - Proper Shipping Name: Not restricted

SECTION XV

REGULATORY INFORMATION

United States

SARA Title III (Superfund Amendments and Reauthorization Act):

311/312 Hazard Categories: Toxic, irritating substance, sensitizing substance

313 Reportable Ingredients: Diisocyanate compounds

CERCLA (Comprehensive Response, Compensation, and Liability Act)

CERCLA RQ: 4,4-Methylene Diphenyl Diisocyanate (CAS 101-68-8) has 5,000 lb RQ (reportable quantity). Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).

TSCA (Toxic Substance Control Act):

TSCA Regulatory: All ingredients are on TSCA inventory.

OSHA Hazard Comm. Rule: This material is classified as a hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION XVI

OTHER INFORMATION

HMIS Rating: Health – *2 Flammability – 1 Physical Hazard: 1

PREPARED BY: CRAIG GAUL

TITLE: PRESIDENT

ORIGINAL DATE: 11-17-05

REVISED DATE: None

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.