SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Protect 4000-4100 Part B
PRODUCT CODES: Protect-4000-B/1, Protect-4000-B/5, Protect-4000-B/55, Protect-4100-B/1, Protect-4100-B/5, Protect-4100-B/55
MANUFACTURER: Protective Industrial Polymers
ADDRESS: 7875 Bliss Parkway North Ridgeville, Ohio 44039
EMERGENCY PHONE: CHEMTREC PHONE: 800-424-9300 (outside USA) 703-527-3887
OTHER CALLS: 440-327-0015
PRODUCT USE: Industrial Use Only
PREPARED BY: MEY

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>% WT</th>
<th>Name</th>
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<tbody>
<tr>
<td>28182-81-2</td>
<td>&gt;95</td>
<td>Hexane, 1,6-diisocyanato-,homopolymer</td>
</tr>
<tr>
<td>822-06-0</td>
<td>0.1-0.5</td>
<td>Hexamethylene-1,6-Diisocyanate Chemical Family:</td>
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<tr>
<td>Polyfunctional polyisocyanate</td>
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Intended Use: Industrial Use

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
Toxic gases/fumes may be given off during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water. Use cold water spray to cool fire exposed containers to minimize the risk of rupture. Causes respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Animal test and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction. Causes eye irritation. May cause lung damage.

ROUTES OF ENTRY: Eyes, Skin, ingestion and inhalation

POTENTIAL HEALTH EFFECTS

EYE: May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.
SKIN CONTACT: May cause skin sensitization or other allergic responses.
SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts.
INGESTION: Single Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.
INHALATION: May cause respiratory sensitization or asthma in susceptible individuals. Excessive exposure may cause irritation to upper respiratory tract.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: This material or its emissions may aggravate pre-existing eye disease. Pre-existing skin disorders. Diisocyanate or polyisocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate the mucous membranes in the respiratory tract with symptoms of runny nose, sore throat, coughing chest discomfort, shortness of breath and reduced lung response to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma bronchitis, bronchial spasm and pulmonary edema. Chemical or hypersensitivity pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.
EYES: Immediately flush the eye with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.

SKIN: Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention of ill effect or irritation develops.

INGESTION: If product is ingested, do not induce vomiting and contact a physician or Poison Control Center.

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically. Inhale corticosteroid dose aerosol. Administer corticosteroid dose aerosol to prevent pulmonary edema.

SECTION 5: FIRE-FIGHTING MEASURES

Flash point: 208 °C (DIN/EN 22719; ISO 2719)
Auto Ignition: > 200 °C (DIN 51794)

NFPA HAZARD CLASSIFICATION

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
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<tbody>
<tr>
<td>2</td>
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</table>

OTHER:

HMIS HAZARD CLASSIFICATION

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
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<tr>
<td>2</td>
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</table>

PROTECTION:

EXTINGUISHING MEDIA: Use dry extinguishing media, foam

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Environmental precautions:
Evacuate non-emergency personnel. Isolate the area and prevent access. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill to prevent spread into drains, sewers, water supplies, or soil. Saturate with absorbant material and neutralization solution and mix.

Cleanup:
Spills should be contained, solidified, and placed in suitable containers for disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid all sources of ignition: heat, sparks, and open flames.

OTHER PRECAUTIONS: For Industrial Use Only. Keep container tightly closed when not in use.

SECTION 7 NOTES: Keep container tightly closed and dry; store in a cool place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air purifying respirator. Respiratory protection in case of vapor/aerosol release. Combination filter for gases/vapors of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)
SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather items, such as shoes, belts and watchbands should be removed and destroyed.

ENGINEERING CONTROLS: Proper industrial hygiene practices are required for workers and should be achieved through engineering controls including ventilation with a high turnover rate whenever feasible. When such controls are not available or not feasible to achieve full protection, respirators for workers and other personal protective equipment is mandated. Exhaust air may need to be filters to reduce environmental contamination and odors.

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid inhalation of mists. Contact with eyes and skin must be avoided.

WORK HYGIENIC PRACTICES: Always follow Good personal hygiene practices when working with this material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Liquid, colorless to light yellow

ODOR: odorless

Melting range: <40 C

Vapor Pressure: 0.0001 mbar (20 C)

Density: 1.166 g/cm3 (20 C) (DIN 51757)

Viscosity, dynamic: 2.5-4 Pa.s (20 C)

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:
Stable under normal conditions

Conditions to Avoid:
Avoid excessive heat and ignition sources.

Hazardous reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F, may cause polymerization.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity
Oral:
LD50/rat: > 2,000 mg/kg

Skin irritation:
rabbit: non-irritant (OECD Guideline 404)

Eye irritation:
Rabbit: non-irritant (OECD Guideline 405)

Sensitization:
Buehler test/guinea pig: Non-sensitizing.

Guinea pig maximization test/: sensitizing
Sensitizing effect in animal tests

Other information:
The product has not been tested. The statement has been derived from products of a similar structure and composition.
SECTION 12: ECOLOGICAL INFORMATION

Environmental fate and transport
Biodegradation: Not readily biodegradable

No data available for this product.

Environmental toxicity
Acute and prolonged toxicity to fish:
LC50: > 100 mg/l

Acute toxicity to aquatic invertebrates:
Daphnia magna/EC50: > 100 mg/l

Toxicity to aquatic plants:
Algae: > 100 mg/l

Toxicity to microorganisms:
Bacteria/EC50: > 1,000 mg/l

Other ecotoxicological advice:
Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed. The product has not been tested. The statement has been derived from products of a similar structure and composition.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

Empty container precautions: Empty containers retain product residue, observe all precautions for product. Do not heat or cut empty containers with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

SECTION 14: TRANSPORT INFORMATION

This product ships as non-regulated when in individual containers of less than the product RQ

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS:
ID NUMBER:
Packing Group:
Label Statement:

WATER TRANSPORTATION
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS:
ID NUMBER:
Packing Group:
Label Statements:

AIR TRANSPORTATION
PROPER SHIPPING NAME: Not Regulated
HAZARD CLASS:
ID NUMBER:
Packing Group:
Label Statements:
SECTION 15: REGULATORY INFORMATION

Registration status:

TSCA, US released / listed OSHA hazard category: Skin and/or eye irritant

SARA hazard categories (EPCRA 311/312): Acute

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER: This MSDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200, 91/155/EEC and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the MSDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Responsibility for the product sold is subject to our standard terms and conditions, a copy of which is available upon request. This company warrants only that its products meet the specifications stated in the sales contract. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, NO Guaranty, Warranty, or representation is made, intended, or implied as to the correctness, or sufficiency of any information, or as to the merchantability or suitability or fitness of any chemical compounds or other products for any use thereof are not subject to a claim by a third party for infringement of any patent or other intellectual property right. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. Liability by this company for all claims, whether arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. For all products listed, the user should obtain detailed information on toxicity, together with the proper standards. Toxicity and risk characteristics of chemical compounds of products may differ when used with other materials or in a manufacturing or other process. Those risk characteristics should be determined by the user and made known to handlers, processors, and end users.