

1. Identification

Product identifier: POLYSTAR PRO ST PART B
Other means of identification: ---
Recommended use: Floor coating
Restriction on use: Any that differs from the recommended use
Supplier Name: U.S. Resin Supply & Manufacturing
1309 Coffeen Ave. suite 16257
Sheridan, Wyoming
United States, WY82801
Telephone: 307-336-0741
Available hours: 9 AM to 5 PM Monday to Friday

2. Hazard identification

Signal word: DANGER

Product classification:



Acute toxicity-inhalation - Category 3.

Respiratory sensitization - Category 1.

Serious eye irritation - Category 2A. Skin sensitization - Category 1A. Specific target organ toxicity – single exposure - Category 3 Respiratory tract irritation.

Hazard statement(s):
H331 - Toxic if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.

Precautionary statement(s)

Prevention: Do not breathe mist, vapors and spray. Wash hands thoroughly after handling and any other part of the body that may have been exposed to the product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye and face protection. In case of inadequate ventilation, wear respiratory protection.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell: Call a POISON CENTER or a doctor. IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or a rash occurs: Get medical advice. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

Storage: Keep container tightly closed. Store in a well ventilated place. Store locked up.

Disposal: Dispose of contents/container in accordance with local, regional, national and/or international regulations in force.

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Other hazards: No other effects shown.

See toxicological information, section 11

3. Composition / Information on ingredients

No	CAS No :	Common name and synonyms	Concentration % (w/w)
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	80.00 - 100.00 *
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	0.10 - 1.00 *

* The actual concentration range is withheld as a trade secret.

4. First-aid measures

If swallowed, irritation, any type of overexposure or symptoms of overexposure occur during use of the product or persists after use, immediately contact a POISON CENTER, an EMERGENCY ROOM or a PHYSICIAN; ensure that the product safety data sheet is available.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention as soon as possible.

Skin contact: Remove contaminated clothing immediately. Wash the skin with soap and water. Thoroughly wet contaminated clothing. If irritation, consult a doctor.

Inhalation: Move exposed person to fresh air. Keep this person warm and lying down. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately.

Ingestion: If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting unless instructed by medical personnel.

Symptoms: Red eyes, itching, blurred vision and tearing. The worker may develop skin hypersensitivity as well as allergic or asthma symptoms or breathing difficulties if inhaled. Recurrent bronchitis and permanent respiratory embarrassment. The main symptoms of intoxication include headache, nausea, vomiting, weakness, loss of appetite, fatigue, sweating, fever, tachycardia and dyspnea. In the most severe cases, convulsions, hyperthermic coma, liver damage are reported and sometimes death.

Effects (acute or delayed): This product is a serious irritant that may cause reversible damages to the cornea. This product is a respiratory and skin sensitizer. May cause coughing and dry throat.

Immediate medical attention and special treatment: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Suitable extinguishing media: Use dry chemical, CO₂ or sand.

Unsuitable extinguishing media: Jets of water can facilitate the spread of fire.

Specific hazards arising from the hazardous product: May release dangerous fumes. Evacuate the area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases.

Hazardous combustion products: Hydrocyanic acid. Carbon monoxide and dioxide. Nitrogen oxides.

Special protective equipment and precautions for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions: No action shall be taken involving any personal risk or if you do not have suitable training or protection. Evacuate surrounding areas. Do not touch or walk through spilled material. Shut off all heating and ignition sources. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Protective equipment and emergency procedures: Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution. Use inert absorbent or retention tubes in the event of a large spill.

Methods and materials for containment and cleaning up: Stop leak if without risk. Move containers from spill area. Contain leaks and pick up with non-combustible absorbent materials such as sand, earth or vermiculite. Then, place in an appropriate waste disposal container according to local regulations. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Incompatibility: Strong acids and bases as well as strong oxidizing agent. Water, alcohols and amines.

8. Exposure Controls/ Personal protection

Control parameters:

Occupational exposure limit values:

United States

No	CAS No :	Common name and synonyms	IDLH NIOSH	Regulatory Limits			Recommended Limits	
				OSHA PEL		California / OSHA PEL	NIOSH REL	ACGIH ® 2019 TLV ®
				ppm	mg/m ³	8-hour TWA (ST) STEL (C) Ceiling	Up to 10-hour TWA (ST) STEL (C) Ceiling	8-hour TWA (ST) STEL (C) Ceiling
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

IDLH: Immediately Dangerous to Life or Health Concentrations

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limits

California / OSHA: California Division of Occupational Safety and Health

REL: Recommended Exposure Limits

ACGIH ®: American Conference of Governmental Industrial Hygienists

TLV ®: Threshold Limit Values

Appropriate engineering controls: When a worker is exposed to a substance identified as having a respiratory sensitizing effect, exposure must be kept to a minimum, even when it remains within the expected standards regardless of the duration of exposure. Recirculation must be prohibited. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eyes: DO NOT WEAR CONTACT LENSES. Wear anti-splash safety goggles.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties.

Respiratory: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Others: Wear protective clothing with long sleeves and appropriate safety shoes at all times.

9. Physical and chemical properties

Physical state: Liquid

Colour: Clear

Odour: Odourless

Melting/Freezing point: - 51 °C (-59.8 °F)

Initial boiling point/boiling range: Not applicable

Flammability: Not applicable

Lower flammable/explosive limit: Not applicable

Upper flammable/explosive limit: Not applicable

Flash point: 170 °C (338 °F) Closed cup

Auto-ignition temperature: Not applicable

Decomposition temperature: 250 °C (482 °F)

pH: Not applicable

Kinematic viscosity: 1045 mm²/s (at 40 °C)

Solubility (in water): Insoluble

Partition coefficient – n-octanol/water (Log Kow): > 1

Vapour pressure: 0.001 mm Hg at 20 °C

Density and relative density: 1.17 kg/L at 20 °C (water = 1)

Relative vapour density: > 1 (air = 1)

Particle characteristics: Not applicable

10. Stability and reactivity

Reactivity: Stable under recommended conditions of storage and handling.

Chemical stability: This product is unstable under the following conditions: In moist air or when in contact with water.

Possibility of hazardous reactions: May release toxic and corrosive products when heated.

Conditions to avoid: Some risk may be expected of corrosive and toxic decomposition products. To avoid thermal decomposition, do not overheat. Keep away from incompatible products (see section 7).

Incompatible materials: None known at room temperature.

Hazardous decomposition products: Hydrocyanic acid. Carbon monoxide and dioxide. Nitrogen oxides.

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11. Toxicological information

	Oral	Dermal	Inhalation gases	Inhalation vapours	Inhalation dusts/mists
ATE _{product}	> 5 000 mg/kg	> 5 000 mg/kg	N/A	9.26 mg/l	4.63 mg/l

No	CAS No :	Common name and synonyms	LD ₅₀ oral mg/kg	LD ₅₀ skin mg/kg	LC ₅₀ inhalation ppmV 4h - gases	LC ₅₀ inhalation mg/l 4h - vapours	LC ₅₀ inhalation mg/l 4h - dusts-mist
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	> 5000	> 5000	N/A	9.25	4.625
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	768	600	N/A	0.12	0.005

Routes of exposure: This product is absorbed through the respiratory tract, skin and gastrointestinal tract.

Symptoms: Red eyes, itching, blurred vision and tearing. The worker may develop skin hypersensitivity as well as allergic or asthma symptoms or breathing difficulties if inhaled. Recurrent bronchitis and permanent respiratory embarrassment. The main symptoms of intoxication include headache, nausea, vomiting, weakness, loss of appetite, fatigue, sweating, fever, tachycardia and dyspnea. In the most severe cases, convulsions, hyperthermic coma, liver damage are reported and sometimes death.

Delayed and immediate effects: This product is a serious irritant that may cause reversible damages to the cornea. This product is a respiratory and skin sensitizer. May cause coughing and dry throat.

Aspiration hazard	N/A
Skin corrosion - Skin irritation	N/A
Serious eye damage - Serious eye irritation - Eye irritation	Yes
Skin sensitization	Yes
Respiratory sensitization	Yes
Specific target organ toxicity – single exposure Category 3 Respiratory tract irritation	Yes
Specific target organ toxicity – single exposure	N/A
Specific target organ toxicity – single exposure Category 3 Narcotic effects	N/A
Specific target organ toxicity – repeated exposure	N/A

No	CAS No :	Common name and synonyms	IARC	ACGIH	Mutagenicity	Effect on reproduction
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	Not listed	Not listed	No effects shown.	No effects shown.
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	Not listed	Not listed	No effects shown.	No effects shown.

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Cancer classification under IARC (International Agency for Research on Cancer)

Group 1: carcinogenic to humans.
Group 2A: probably carcinogenic to humans.
Group 2B: possibly carcinogenic to humans.
Group 3: not classifiable as to its carcinogenicity to humans.
Group 4: probably not carcinogenic to humans.

Cancer classification under ACGIH (American Conference of Governmental Industrial Hygienists)

Group A1: confirmed human carcinogen.
Group A2: suspected human carcinogen.
Group A3: confirmed animal carcinogen with unknown relevance to humans.
Group A4: not classifiable as a human carcinogen.
Group A5: not suspected as a human carcinogen.

12. Ecological information

Ecotoxicity

No	CAS No :	Common name and synonyms	%	Aquatic Ecotoxicity short term	Aquatic Ecotoxicity long term	Terrestrial Ecotoxicity
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	80.00 - 100.00	Not available.	Harmful to aquatic life with long lasting effects.	No known adverse effect to the environment.
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	0.10 - 1.00	No known adverse effect to aquatic life.	No known adverse effect to aquatic life.	No known adverse effect to the environment.

Persistence and degradability. Bioaccumulative potential. Other adverse effects

No	CAS No :	Common name and synonyms	%	Persistent	Bio-accumulation	Aquatic ecotoxicity
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	80.00 - 100.00	Yes	No	No
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	0.10 - 1.00	No	No	No

Degradability: N/A

Mobility in soil: N/A

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13. Disposal considerations

Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

14. Transport information

	TDG	DOT	IMDG	IATA
UN Number	2206	2206	2206	2206
Proper shipping name	ISOCYANATE SOLUTION, TOXIC, N.O.S. (HDI, homopolymer)	ISOCYANATE SOLUTION, TOXIC, N.O.S. (HDI, homopolymer)	ISOCYANATE SOLUTION, TOXIC, N.O.S. (HDI, homopolymer)	ISOCYANATE SOLUTION, TOXIC, N.O.S. (HDI, homopolymer)
Transport hazard class(es)	6.1	6.1	6.1	6.1
Packing group	III	III	III	III

Canada - ERAP

Not applicable

United States - Reportable Quantities (RQ)

No	CAS No :	Common name and synonyms	RQ lbs (kg)
1	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	100 (45.4)

Transport in bulk (according to Annex II of the International Convention for the Prevention of Pollution From Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78), and the International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (IBC Code)):
N/A

Marine pollutant: No

Exemption for limited quantity: 5 L

In accordance with the Canadian Transport of Dangerous Goods regulations by Road, we use the 1.17 exemption when applicable. In accordance with 49 CFR article 172.315 for transportation by a mode other than air, we use the Limited quantities exemption when applicable.

Other exemptions: Not applicable

Special precautions: Not applicable

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15. Regulatory information

United States

No	CAS No :	Common name and synonyms	%	TSCA	PROP-65	RTK
1	28182-81-2	1,6-Hexamethylene diisocyanate, homopolymer. HDI, homopolymer	80.00 - 100.00	X		
2	822-06-0	1,6-Hexamethylene diisocyanate, monomer. HDI monomer	0.10 - 1.00	X		X

The classification of the product and the SDS were developed in accordance with HCS 2024.

16. Other information

Date: 2025-03-07

Version: 1

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