SAFTY DATA SHEET

PUR301 B

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name:	PUR301 B
Chemical name:	Polyaspartic coating hardener
Company:	CHANGSHA PERFLEX NOVEL MATERIALS CO.,LTD
Address:	North Zone, 20th Floor, Block A, Junyue Mansion, Yuanda 1st Road, Furong Dist, Changsha Hunan
Email:	sales@perflex.com.cn
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Emergency Phone:	86-(0)18390992093
SDS Date:	2026/4/30

SECTION2 HAZARDS IDENTIFICATION

GHS Hazard Category:

Hazardous to the aquatic environment , long-term (chronic),Category 3.（H412）

Signal word:

Warning 

Hazard statements:

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation

H412 Harmful to aquatic life with long-lasting effects

Precautionary statements:

P261 Avoid breathing dust/fumes/gases/mist/vapors/spray

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothes must not be taken out of the workplace.

P280 Wear protective gloves/protective clothing/protective goggles/protective mask.

P302+P352: If on skin, rinse thoroughly with water.

P333+P313: If skin irritation or rash occurs, seek medical advice/consult a doctor.

P362+P364 Remove contaminated clothing and wash it before reusing.

P304+P340: If inhaled accidentally, move the person to a place with fresh air and keep them in a position that ensures comfortable breathing.

P312 If you feel unwell, call a poison control center/doctor.

P403+P233: Store in a well-ventilated area. Keep container tightly closed.

P501 Must be disposed of at a qualified treatment facility in accordance with local/regional/national/international regulations.

P502 For information on recycling and reuse, please consult us.

SECTION3 COMPOSITION / INFORMATION ON INGREDIENTS

Type of product: Mixture

Product components	CAS	Component
Hydrophilic isocyanate-based homopolymer	NA	>=99.8%

SECTION4 FIRST-AID MEASURES

General Advice: Immediately remove contaminated clothing and shoes.

Inhalation:

Immediately move to a place with fresh air. If breathing stops, perform artificial respiration and seek medical attention immediately.

Skin Contact:

Thoroughly rinse the affected area with soap and plenty of water. If an allergic reaction occurs, seek medical attention.

Eye Contact:

Keep the eyes open and flush with plenty of water for an extended period (at least 10 minutes). Seek medical attention immediately.

Ingestion:

Do not induce vomiting; seek medical attention. Do not give anything by mouth to an unconscious patient. If the patient is conscious, rinse the mouth with water.

SECTION5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Foam, CO2, or dry powder. If no other fire-extinguishing agents are available, large amounts of water can be sprayed.

Ineffective fire extinguishing agent:

Water spray

Special protective equipment:

Appropriate protective gear, self-contained breathing apparatus, safety shoes, gloves, safety helmet, and protective clothing. Additional information: In the event of fire or explosion, do not breathe the smoke. If possible, move the container away from the fire; otherwise, cool it down with water. Do not reseal containers that have already been opened. Containers may explode if overheated.

SECTION6 LEAKAGE EMERGENCY HANDLING

Workplace protective measures, protective equipment, and emergency response procedures:

Wear protective equipment (see Section 8). Ensure adequate ventilation/exhaust. Keep unauthorized personnel away.

Environmental protection measures: Prevent leaked materials from entering restricted areas such as sewers, drainage ditches, and water supply sources.

Containment, removal methods for leaked chemicals, and disposal materials used:

SECTION7 HANDLING AND STORAGE

Precautions for safe operation:

Ensure adequate air exchange or exhaust ventilation in the workspace, and equip with exhaust systems to guarantee that concentrations do not exceed exposure limit levels. Implement explosion-proof measures. Strictly adhere to the personal protective measures outlined in Part Eight: avoid contact with skin and eyes, and prevent inhalation of vapors. Keep away from food, beverages, and tobacco. Wash hands before taking breaks and at the end of the workday. Store work clothes separately and promptly remove any contaminated or

Operating precautions:

Operate in accordance with good industrial hygiene and safety practices. Avoid contact with skin and eyes. Handle and package according to the equipment used and the product's specifications.

Storage precautions:

This product should be stored in a sealed container at a temperature between 5 and 35°C, with a shelf life of at least 12 months. The storage facility must be protected from direct sunlight, maintain a stable temperature, and ensure adequate ventilation. It should also be kept away from incompatible substances, food, and beverages. Storage containers must be clearly labeled, kept with the opening facing upward to prevent spills.

SECTION8 CONTACT CONTROL/PERSONAL PROTECTIVE EQUIPMENT

Appropriate engineering controls:

Provide suitable exhaust ventilation equipment in the operating area.

Eye/Facial Protection:

Full-face protective goggles

Hand protection:

Chemical-resistant gloves

Butyl rubber:

Thickness ≥ 0.5 mm, puncture time ≥ 480 min

Polychloroprene:

Thickness ≥ 0.5 mm, penetration time ≥ 480 min

Frequent repeated contact:

Gloves with a protection level of Class 5 or higher are recommended.

Body protection:

Full-facepiece respirator. Use an A-type organic vapor filter cartridge; when dust or aerosols are present, use at least an A/P2-type filter cartridge.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Light yellow transparent
Odour	Amine odor
PH	No data available
Melting point/freezing point	About -22°C
Boiling point/boiling range	>300°C
Flash point (℃, closed cup)	About 196 ℃

Vapour pressure	ca. 17 hPa (at 20°C); ca. 26 hPa (at 50°C) ca. 28 hPa (at 55°C)
Steam density	No data available
Relative density (Water= 1)	About 1.16g/cm3
Water solubility	Not soluble in water
n-octanol / water partition coefficient	No data available
Auto-ignition temperature	No data available
Ignition temperature	No data available
Decomposition temperature	About 425°C
Viscosity, dynamic	About 1500-3500 mPa.s

Section10 CHEMICAL STABILITY AND REACTIVITY INFORMATION

Reactivity:

With water, amines, strong bases, ethanol, and heavy metals.

Chemical stability:

Stable under recommended conditions

Possible harmful reactions:

It reacts slowly with water below 50°C, but the reaction accelerates when exposed to water or steam above 50°C, producing carbon dioxide and increasing pressure. Other reactions are exothermic and may also lead to increased pressure.

Avoid conditions:

High temperature, low temperature, humidity, strong light.

Incompatible substances:

Water, acids, ethanol, amines, bases, and heavy metals.

Toxic decomposition products:

Under the above-mentioned storage and usage conditions, no harmful decomposition products will be generated.

SECTION11 TOXICOLOGICAL INFORMATION

There are no available toxicological studies for this product.
Below are the toxicological data for these ingredients.

Acute toxicity, oral

Hydrophilic Isocyanate-Based Homopolymer
Median lethal dose (LD50) in rats: > 5,000 mg/kg
Method: OECD Chemical Test Guideline 423
Toxicological studies on similar products

Acute toxicity, dermal

No data available.

Acute toxicity, inhalation

No data available.

Primary Skin Irritation

Hydrophilic Isocyanate-Based Homopolymer
Species: Domestic rabbitResult: The stimulation effect cannot be distinguished from the mechanical stimulation caused by removing the test sample
Category: Non-irritating to skin
Method: OECD Chemical Testing Guideline 404
Toxicological studies on similar products

Primary mucosal irritation

Hydrophilic Isocyanate-Based Homopolymer
Species: Domestic rabbit
Result: Mild irritation
Category: No eye irritation
Method: OECD Chemical Test Guideline 405
Toxicological studies on similar products

Allergenicity

Hydrophilic Isocyanate-Based Homopolymer
Skin Sensitization (Local Lymph Node Assay (LLNA)):
Species: Mouse
Result: Positive
Classification: H317: May cause an allergic skin reaction (Subcategory 1B)
Method: OECD Chemical Test Guideline 429
Toxicological studies on similar products

Subacute, subchronic, and delayed toxicity

No data available

Carcinogenicity

No data available

Reproductive toxicity/Fertility

No data available

In vitro genotoxicity

Hydrophilic Isocyanate-Based Homopolymer
Test type: Salmonella/micronucleus assay (Ames test)
Result: No evidence of mutagenicity.
Method: OECD Chemical Testing Guideline 471
Toxicological studies on similar products

Genotoxicity in the body

No data available

STOT Assessment – Single Exposure

Hydrophilic Isocyanate-Based Homopolymer
May cause respiratory irritation.
Research on similar products

STOT Assessment – Repeated Exposure

No data available

Inhalation hazard

No data available

additional information

Special properties/effects: Overexposure, especially when spraying coatings containing isocyanates without taking the necessary precautions, can pose a risk of irritation to the eyes, nose, throat, and respiratory tract at certain concentrations. Allergic symptoms (such as shortness of breath, coughing, wheezing, etc.) may appear with a delay. Individuals prone to allergies may experience these effects even at lower concentrations of isocyanates. Prolonged skin contact may lead to brown spots and irritative reactions.
Animal studies and other research indicate that dermal contact with diisocyanates may lead to isocyanate allergy and respiratory reactions.

SECTION12 ECOLOGICAL INFORMATION

12.1 Toxicity Acute

Acute Fish toxicity	Hydrophilic Isocyanate-Based Homopolymer Median lethal concentration (LC50) 35.2 mg/L Species: Zebrafish Test period: 96 h
Acute toxicity for daphnia	Hydrophilic Isocyanate-Based Homopolymer Half-maximal effective concentration (EC50) > 100 mg/L Species: Daphnia Test duration: 48 hours Method: OECD Chemical Testing
Acute toxicity for algae	Hydrophilic Isocyanate-Based Homopolymer ErC50 72 mg/l Species: Near-armed chain algae (green algae) Test duration: 72 hours
Acute bacterial toxicity	Hydrophilic Isocyanate-Based Homopolymer Half-maximal effective concentration (EC50) > 10,000 mg/L Species: Activated sludge Method: OECD Chemical Test Guideline

12.2 Persistence and degradation

Biodegradability	Biodegradability: 0%, 28 days, not easily biodegradable. Method: OECD Chemical Testing Guideline 301 F Ecotoxicological study report on similar products

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 PBT and vPvB assessment results

No data available

Section13 DISPOSAL CONSIDERATIONS

Waste disposal method:

Waste products and their containers must be disposed of in accordance with national and regional hazardous waste management regulations.

Empty Container Precautions:

Empty the container as much as possible (e.g., by pouring, scraping, or draining until “drip-dry”). Dispose of it at an appropriate collection point according to existing recycling programs in the chemical industry.

SECTION14 TRANSPORT INFORMATION

Item	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	**NO**	**NO**	**NO**
UN Proper shipping name	**NO**	**NO**	**NO**
Transport hazard Class	**NO**	**NO**	**NO**
Packaging group	**NO**	**NO**	**NO**
Environmental hazards	**NO**	**NO**	**NO**
Special precautions for user	**See section 2**	**See section 2**	**See section 2**
Transport in bulk according to Annex II of Marpol and the IBC Code	**Not available**	**Not available**	**Not available**

SECTION15 REGULATORY INFORMATION

The following laws, regulations and standards make corresponding provisions on the safe use, storage, transportation, handling, classification and marking of chemicals.

Law of the People's Republic of China on the Prevention and Control of Occupational Diseases:

Occupational Asthma Diagnostic Criteria (GBZ57-2008): not listed.
Technical Specifications for Occupational Health Monitoring (GBZ188-2007): not listed.
Safety Regulations for Painting Operation, Painting Process Safety and Its Ventilation and Purification (GB6514-2008) and Safety Technology for Coating Production Enterprises
Technical Regulations (AQ5204-2008): not listed.

Environmental management regulations:

Inventory of Existing Chemical Substances in China (IECSC, 2013 edition): Unclassified ingredients are listed
National Hazardous Waste List (2016): not listed.

Regulations on the Administration of Precursor Chemicals:

Classification and variety of precursor chemicals: not listed.

SECTION16 OTHER INFORMATION

Revision Notes:

The previous SDS has been revised in accordance with the standard “Content and Order of Items for Safety Data Sheets of Chemicals” (GB/T16483-2008).

Disclaimer:

Wanhua Chemical has provided all relevant information in this MSDS in a comprehensive and truthful manner. However, we cannot guarantee its absolute comprehensiveness or accuracy. This MSDS is intended solely to provide safety precautions for personnel who have received appropriate professional training and are authorized to use this product. Individuals obtaining this MSDS must independently assess its suitability under specific usage conditions. In particular circumstances, Wanhua Chemical shall not be held liable for any injuries resulting from the use of this MSDS.