
SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Product Name: ProTect Polyure Walkway Base and Sealer

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture: Industrial One Component Aliphatic Stone Binder
- Use advised against: No specific uses advised against are identified

1.3 Details of the supplier of the safety data sheet

- Name of Supplier:
Protective Polymers Ltd -
Address of Supplier:
Blackwell Road
Huthwaite
Nottinghamshire
NG17 2RG
- Telephone: 01623441106
- Email: - sales@protectivepolymers.com

1.4 Emergency telephone number 01623 441106 Not 24 Hours

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- Classification according to 1272/2008/EC
- Physical hazards: Not Classified
- Health hazards: H332 - Harmful if inhaled., H315 - Causes skin irritation, H319 - Causes serious eye irritation, H335 - May cause respiratory irritation, H317 - May cause an allergic skin reaction, H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- Environmental hazards: H411 - Toxic to aquatic life with long-lasting effects
- CLP: Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, Aquatic Chronic 2

2.2 Label elements

- Signal Word: Danger

SECTION 2: Hazards identification (....)

- Hazard statements
 - Harmful if inhaled.
 - May cause respiratory irritation.
 - Causes skin irritation.
 - Causes serious eye irritation.
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - May cause an allergic skin reaction.
 - Toxic to aquatic life with long lasting effects.
 - Contains isocyanates. May produce an allergic reaction.
- Precautionary statements
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - IF ON SKIN: Wash with plenty of soap and water.
 - Wear protective gloves/protective clothing/eye protection/face protection.
 - Avoid breathing dust/fume/gas/mist/vapours/spray.

2.3 Other hazards

- Contains: ISOCYANATES
 - This substance is not classified as PBT or vPvB according to current EU criteria
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SECTION 3: Composition/information on ingredients

3.1 Composition

- isophorone di-isocyanate
 - CAS Number: 4098-71-9
 - EC Number: 223-861-6
 - REACH Registration Number: 01-2119490408-31-0000
 - Concentration: 30 - 50%
 - Categories: Acute Tox. 1, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, Aquatic Chronic 2
 - Symbols: GHS06, GHS08, GHS09
 - H Statements: EUH204, H315, H317, H319, H330, H334, H335, H411
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SECTION 4: First aid measures

4.1 Description of first aid measures

- Contact with eyes
 - Hold the eyes open and rinse with water for a sufficiently long period of time (at least 10 minutes).
 - Remove any contact lenses and open eyelids wide apart.
 - Get medical attention immediately.
 - Contact with skin
 - In the event of contact with the skin, preferably wash with a cleanser based on polyethylene
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SECTION 4: First aid measures (....)

glycol or with plenty of warm water and soap.
Consult a doctor in the event of a skin reaction.
Wash any contaminated clothing before reuse.
Clean shoes thoroughly before reuse.
Get medical attention if symptoms persist

- Ingestion
Rinse mouth thoroughly with water, removing any dentures.
Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous.
Do not induce vomiting unless under the direction of medical professionals.
If vomiting does occur the head should be kept low so that vomit does not enter the lungs.
Never give anything by mouth to an unconscious person.
Get medical attention if symptoms persist
- Inhalation
Remove affected person from source of contamination.
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Get medical attention if symptoms persist

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms: Headache
Nausea
Shortness of breath
Sore throat
Redness on the skin
- Risks: Repeated or prolonged contact may cause skin sensitization
Repeated or prolonged inhalation exposure may cause asthma

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
 - Give oxygen or artificial respiration if needed
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SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media: The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Use fire-extinguishing media suitable for the surrounding fire
- Unsuitable extinguishing media: Do not use water jets as an extinguisher

5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical combustion products: Carbon oxides (CO, CO₂) nitrogen oxides (NO, NO₂ etc.) hydrocarbons, isocyanate vapours and hydrogen cyanide can be released in case of fire.
- Specific hazards during firefighting: Containers can burst violently or explode when heated, due to excessive pressure build-up

5.3 Advice for firefighters

SECTION 5: Firefighting measures (....)

- Protective actions during firefighting: Avoid breathing fire gases or vapours, evacuate area and keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Due to reaction with water producing CO₂ gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated. Reaction between water and hot isocyanate may be vigorous. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs notify appropriate authorities.
- Special protective equipment for firefighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Safety boots, gloves, safety helmet and protective clothing should be worn. Firefighters clothing conforming to European Standard EN469 will provide a basic level of protection for chemical incidents

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

6.2 Environmental precautions

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. For small spillages absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. For large spillages, if leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4 Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

This product will react with moisture to form a polyurethane, If an open container becomes contaminated with moisture do not reseal as this can lead to pressure increase within the container.

7.3 Specific end use(s)

- The identified uses for this product are detailed in Section 1.2
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SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure controls

Occupational exposure limits of the components:

3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate - CAS 4098-71-9:

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³ (NCO)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³ (NCO)

Sen

WEL = Workplace Exposure Limit

Sen = Substance has the capacity to cause occupational asthma

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Worker - Inhalation Acute local effects: 0.0453 mg/m³

Worker - Inhalation Long-term local effects: 0.0453 mg/m³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Fresh water: 0.06 mg/l

Marine water: 0.006 mg/l

Sediment (freshwater): 218.92 mg/kg

Sediment (marinewater): 21.89 mg/kg

Sewage treatment plant: 10.6 mg/l

Soil: 44.01 mg/kg dw

SECTION 8: Exposure controls/personal protection (....)

EH40/2005 Workplace Exposure Limits: Medical supervision of all employees who come in contact with respiratory sensitisers is recommended. Personell with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not work with MDI based products. The OELs listed do not apply to previously sensitised individuals. Sensitised individuals should be removed from any further exposure.

8.2 Precautionary measures

Appropriate Engineering Controls:

Provide adequate ventilation. Personel, workplace or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Ensure control measures are regularly inspected and maintained. Ensure operatives are trianed to minimise exposure.

Personal Protective Equipment:

Eye/Face Protection:

Eyewear complying with EN 166 should be worn if a risk assessment indicates eye contact is possible. If an inhalation hazard also exists, a full-face respirator may be required instead.

Hand Protection:

Chemical-resistant, impervious gloves complying to European Standard EN 374 should be worn if a risk assessment indicates skin contamination is possible. Examples of gloves materials that might provide suitable protection include: Butyl rubber (BR), Nitrile rubber (NR), Chloroprene rubber (Neoprene). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended. Check during use that gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes of gloves are recommended.

Other Skin and Body Protection:

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Respiratory Protection:

Under normal use of the product respiratory protection should not be required. if a risk assessment indicates inhalation of contaminants is possible respiratory protection should comply with the approved standard. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and that the filter is changed regularly. Gas and combined filter cartridges should comply with European Standard EN 14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN 136. Half mask or quarter mask respirators with replaceable filter cartridges should comply with European Standard EN 140.

Hygeine Measures:

Provide eyewash station and safety shower, Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and work areas every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and beofre eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventative industrial medical examinations should be carried out. Warn cleaning personel of any hazardous properties of the product.

SECTION 8: Exposure controls/personal protection (....)

8.3 Environmental exposure controls

Keep containers tightly sealed when not in use. Avoid spillage or runoff entering drains, sewers or watercourses. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Liquid
- Flammability (liquid): not classified as a flammability hazard
- Flammability (solid, gas): not applicable
- Flash point - not applicable
- pH - not applicable
- Solubility in water: Insoluble in water
- Solubility in other solvents: miscible in most organic solvents

9.2 Other information

- This safety datasheet only contains information relating to safety and does not replace any product information or product specification
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SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts with moist air and water

10.2 Chemical stability

The main removal mechanism of IPDI based products in the environment is hydrolysis. IPDI based products react quickly with water to form predominantly solid, insoluble polyurethanes or polyureas. Under conditions typical of many types of environmental contact, i. e. with relatively poor dispersion of the denser isocyanate, the interfacial reaction leads to the formation of a solid crust encasing partially or unreacted material. This crust restricts ingress of water and hence slows and modifies hydrolysis.

10.3 Possibility of hazardous reactions

Reaction is slow with cold or warm water (< 50 °C), with hot water or steam the reaction is faster, producing carbon-dioxide which may cause a pressure increase in sealed containers.

10.4 Conditions to avoid

Moisture will lead to the product curing as a solid polyurethane

High Temperatures will increase the rate of the above to reactions

10.5 Incompatible materials

No specific material or group of materials is likely to react with the product to produce a hazardous situation

Moisture will lead to the product curing as a solid polyurethane

10.6 Hazardous decomposition products

SECTION 10: Stability and reactivity (....)

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include toxic gases or vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Acute Tox. 4 - Harmful if inhaled

Skin corrosion/irritation:

Skin Irrit. 2 - Causes skin irritation

Serious eye damage/eye irritation:

Eye Irrit. 2 - Causes serious eye irritation

Respiratory sensitisation:

Resp. Sens. 1 - May cause sensitisation or allergic reactions in sensitive individuals

Skin sensitisation:

Skin Sens. 1 - May cause sensitisation or allergic reactions in sensitive individuals

Germ cell mutagenicity:

Not classified based on available information

Carcinogenicity:

Not classified based on available information

Reproductive toxicity:

Not classified based on available information

Specific target organ toxicity - single exposure:

STOT SE 3 - May cause respiratory irritation

Specific target organ toxicity - repeated exposure:

STOT RE 2 - May cause damage to organs through prolonged or repeated exposure

Aspiration hazard:

Not classified based on available information

Further Information:

The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Symptoms of over-exposure may include headache, nausea, shortness of breath, sore throat, or redness on the skin.

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Toxicological data for the components:

3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate - CAS 4098-71-9:

Acute inhalation toxicity

: LC50/4h: 0.03 mg/L

Species: Rat

Method: OECD Test 403

Test atmosphere: Mist

SECTION 11: Toxicological information (....)

Acute oral toxicity	: LD50: 4814 mg/kg Species: Rat Method: OECD Test 401
Acute dermal toxicity	: LD50: ≥7000 mg/kg bw (24 h) Species: Rat Method: OECD Test 402
Skin corrosion/irritation	: Species: Rabbit Result: Corrosive Method: OECD Test 404
Skin sensitisation	: Species: Rabbit Result: Positive May cause sensitisation Method: OECD Test 406
Respiratory sensitisation	: Species: Rabbit Result: Positive May cause sensitisation
STOT - single exposure	: Route of exposure: Inhalation Target organs: Upper respiratory tract May cause respiratory irritation

SECTION 12: Ecological information

12.1 Toxicity

- Based on available data the classification criteria are not met.

12.2 Persistence and degradability

- The degradability of the product is not known

12.3 Bioaccumulative potential

- No information available

12.4 Mobility in soil

- This product is not miscible with water and reacts to form a solid long chain polyurethane. Based on this it is unlikely to present a risk for mobility

12.5 Results of PBT and vPvB assessment

- This substance is not classified as PBT or vPvB according to current EU criteria

12.6 Other adverse effects

- None known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SECTION 13: Disposal considerations (....)

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Dispose of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to the handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Do not empty into drains, sewers or watercourses. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible

SECTION 14: Transport information



14.1 UN number

- UN No.: 3082

14.2 Proper Shipping Name

- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3 Transport hazard class(es)

- Hazard Class: 9

14.4 Packing group

- Packing Group: III

14.5 Environmental hazards

- Marine Pollutant

14.6 Special precautions for user

- IMDG EmS: F-A, S-F
- ADR transport category: 3
- Emergency action code: 32
- Hazard identification number: 90

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SECTION 15: Regulatory information (....)

- United Kingdom - Health and Safety at Work etc Act 1974 (as amended)
- United Kingdom - The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulation 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]
- United Kingdom - EH40/2005 Workplace Exposure Limits
- EU - Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended)
- EU - Commission Regulation (EU) No 2015/830 of 28 May 2015
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures (as amended)

15.2 Chemical safety assessment

- This Safety Data Sheet does not constitute a workplace risk assessment
- A chemical safety assessment has not been carried out for this product

SECTION 16: Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:- EUH204: Contains isocyanates. May produce an allergic reaction. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H330: Fatal if inhaled. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335: May cause respiratory irritation. H411: Toxic to aquatic life with long lasting effects.

Full text of GHS H-Statements referred to under sections 2 and 3:

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation

H332: Harmful if inhaled

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335: May cause respiratory irritation

H411: Toxic to aquatic life with long-lasting effects

Full text of EU H-Statements referred to under section 2 and 3:

EUH204: Contains isocyanates. May produce an allergic reaction

Full list of GHS P-statements

Prevention:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P264: Wash skin thoroughly after handling

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

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P284: [In case of inadequate ventilation] wear respiratory protection.

Response:

P302+352: IF ON SKIN: Wash with plenty of water.

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P321: Specific treatment (see medical advice on this label).

P332+313: If skin irritation occurs: Get medical advice/attention.

SECTION 16: Other information (....)

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P337+313: If eye irritation persists get medical advice/attention.

P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P362+364: Take off contaminated clothing and wash it before reuse.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage.

Storage:

P403+233: Store in a well ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal:

P501: Dispose of contents/containers in accordance with national regulations.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

--- end of safety datasheet ---
