



Material Safety Data Sheet (MSDS) – Polyurethane Block Paving Sealer

Issued: 11/3/12

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: Polyurethane Block Paving Sealer

Chemical Name: Isocyanate Prepolymer in Flammable Solvent.

Application: Surface coating for block paving

Company name: Smartseal UK Ltd, 14a Annwood Lodge Business Park, Rayleigh, Essex SS6 7UA

Tel: 01268 722500

Email: info:smartseal.co.uk

2. HAZARDS IDENTIFICATION

Main hazards: Flammable. Irritating to skin. May cause sensitisation by inhalation. Harmful by inhalation and in contact with skin.

CLASSIFICATION: Xn;R20/21. R42. Xi;R38. R10.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
TOLUENE-DIISOCYANATE	247-722-4	26471-62-5	< 1%	Carc3;R40 T+;R26 R42/43 Xi;R36/37/38 R52/53
XYLENE	215-535-7	1330-20-7	60-100%	R10 Xn;R20/21 Xi;R38

4. FIRST AID MEASURES (SYMPTOMS)

GENERAL INFORMATION

Chemical burns must be treated by a physician.

INHALATION

Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.

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INGESTION

Rinse mouth thoroughly. Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. NOTE - Effects may be delayed. Keep affected person under observation. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention if irritation persists after washing.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Small fires: Foam, carbon dioxide or dry powder. DO NOT use water if avoidable. Larger fires: Water spray, fog or mist. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

SPECIAL FIRE FIGHTING PROCEDURES

Do not get water inside container. NOTE! Use air-supplied respirators to protect against gases/fumes. Keep run-off water out of sewers and water sources. Dike for water control. Move container from fire area if it can be done without risk. If risk of water pollution occurs, notify appropriate authorities. Keep up-wind to avoid fumes.

UNUSUAL FIRE & EXPLOSION HAZARDS

Prolonged exposure to heat may lead to formation of toxic gases. May ignite if heated. If heated, volume and pressure increases strongly, resulting in explosion of container.

SPECIFIC HAZARDS

Fire or high temperatures create: Toxic gases/vapours/fumes of Carbon dioxide (CO₂). Carbon monoxide (CO). Hydrogen cyanide (HCN).

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drains, sewers or watercourses. Collect and dispose of spillage as indicated in section 13.

SPILL CLEAN UP METHODS

DO NOT touch spilled material. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Clean-up personnel should use respiratory and/or liquid contact protection. Avoid contact with skin or inhalation of spillage, dust or vapour. Collect with absorbent, non-combustible material into suitable containers. Shovel into dry containers. Cover and move the containers. Flush the area with water. Provide ventilation and confine spill. Do not allow runoff to sewer. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS

Keep away from heat, sparks and open flame. Use mechanical ventilation in case of handling which causes formation of vapours. Static electricity and formation of sparks must be prevented. Avoid spilling, skin and eye contact. Use explosion proof electric equipment. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Wear full protective clothing for prolonged exposure and/or high concentrations. Do not use contact lenses. Avoid contact with water, alcohols, amines and other materials that may react with isocyanates. Vapours are heavier than air and may travel along the floor and in the bottom of containers.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Keep in original container. Keep away from heat, sparks and open flame. Isocyanates react with water to liberate carbon dioxide. Any ingress of moisture into an isocyanate container, whether full or empty, can lead to a pressure build up and subsequent explosion.

STORAGE CLASS

Flammable liquid storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
TOLUENE-DIISOCYANATE	Wel		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)
XYLENE	Wel	LT - ppm	220 mg/m3(Sk)	100 ppm(Sk)	441 mg/m3(Sk)

Exposure Limits: Exposure limits for isocyanates are quoted as NCO. WEL = Workplace Exposure Limit.

Respiratory protection: Type approved RPE for acidic vapours
Hand protection: Protective gloves made of: Nitrile. or Neoprene.
Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.
Skin protection: Use protective overalls

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid

Colour: Light or Pale (Straw)

Odour: Characteristic of Solvents

Volatility Description: Volatile

Solubility in water: Soluble in organic solvents

Viscosity: <50 mPas @25°C

FLASH POINT (°C)

26 CC (Closed cup).

Relative density: 0.85 - 0.95 @25°C

VOLATILE BY VOL.

(%) ~70

10. STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions. Avoid: Heat, sparks, flames. Moisture.

CONDITIONS TO AVOID

Avoid contact with water. Avoid heat, flames and other sources of ignition.

MATERIALS TO AVOID

Acids, oxidising. Amines. Acids, non-oxidising. Acids - organic. Bases, alkalies (inorganic). Alcohols, glycols. Water, steam, water mixtures.

HAZARDOUS DECOMPOSITION PRODUCTS

Toxic gases/vapours/fumes of: Carbon dioxide (CO₂). Carbon monoxide (CO). Oxides of: Nitrogen. Hydrogen cyanide (HCN). Nitrous gases (NO_x).

11. TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

Preparation contains small volumes of isocyanate which may cause allergic reaction and irritation of respiratory system. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

INHALATION

Harmful by inhalation. May cause sensitisation by inhalation. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

Harmful in contact with skin. Irritating to skin. Prolonged or repeated exposure may cause severe irritation. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

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EYE CONTACT

Spray and vapour in the eyes may cause irritation and smarting.

HEALTH WARNINGS

This chemical can be hazardous when inhaled and/or touched. **INHALATION.** Preparation contains small volumes of isocyanate which may cause allergic reaction and irritation of respiratory system. Prolonged inhalation of high concentrations may damage respiratory system. Pulmonary sensitiser. Severe pulmonary irritant. Recognised allergen. **SKIN CONTACT.** Irritating to skin. May cause sensitisation by skin contact. **EYE CONTACT.** May cause severe irritation to eyes. **INGESTION.** May cause discomfort.

RESPIRATORY SYSTEM. Repeated exposure may cause chronic upper respiratory irritation. Asthma, pulmonary sensitisation.

ROUTE OF ENTRY: Inhalation.

TARGET ORGANS: Respiratory system, lungs.

MEDICAL SYMPTOMS: **EYES AND MUCOUS MEMBRANES.** Irritation, burning, lachrymation, blurred vision after liquid splash. **RESPIRATORY SYSTEM.** Severe pulmonary irritation. General respiratory distress, unproductive cough. **SKIN.** Severe skin irritation. **DIGESTIVE SYSTEM.** Nausea, vomiting. Severe abdominal pain.

MEDICAL CONSIDERATIONS: Chronic respiratory and obstructive airway diseases. Skin disorders and allergies. Employees ought to be examined by physician prior to work with diisocyanates. Allergic reactions may develop after inhalation of low concentrations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Not regarded as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

14. TRANSPORT INFORMATION

Proper Shipping Name:	Resin Solution Flammable	
UN No.	1866	ADR Class No. 3
ADR Class	Class 3: Flammable liquids	ADR Pack Group 111
Hazard No. (ADR)	30 Flammable liquid (flash-point between 23°C and 61°C, inclusive) or flammable liquid or solid in	IDMG Class 3

the molten state with a flash point above 61°C heated to a temperature equal to or above its flash-point, or self heating liquid.

15. REGULATORY INFORMATION

Labelling: Harmful



Contains: TOLUENE-DIISOCYANATE
XYLENE

Flammable

Irritating to Skin

May cause sensitisation by inhalation

Harmful by inhalation and in contact with skin

16. OTHER INFORMATION

INFORMATION SOURCES: Material Safety Data Sheet, Misc. manufacturers.

If the material is redistributed for sale, details of its hazards and recommended methods for safe handling should be available to all sites and / or customers.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.