



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

Product Name URETHANE 2PACK® PART B HARDENER ANTI-GRAFFITI COATING NS 4500
Synonyms ANTI-GRAFFITI COATING 2PACK • ANTI-GRAFFITI COATING NS4500

1.2 Uses and uses advised against

Uses PROTECTIVE COATING
 This product is used in conjunction with Urethane 2Pack® (Part A) Anti-Graffiti Coating NS 4500. Please consult the appropriate SDS before use.

1.3 Details of the Supplier of the Product

Supplier Name DURABLE CONCRETE COATINGS PTY LTD
ABN 48 602 499 052
Address 10 Lapis Street, Underwood, QLD, 4119, Australia
Telephone (07) 3808 2769
Email sales@durableconcretecoatings.com.au
Website <http://www.durableconcretecoatings.com.au>

1.4 Emergency Telephone Numbers

Poison Information Centre 13 11 26

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classifications
 Flammable Liquids: Category 3
 Aspiration Hazard: Category 1
 Acute Toxicity: Skin: Category 4
 Skin Sensitation: Category 1
 Acute Toxicity: Inhalation: Category 4
 Respiratory Sensitation: Category 1
 Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
 Aquatic Toxicity (Chronic): Category 2

2.2 Label Elements

Signal Word

DANGER

Pictograms



Hazard Statements

H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H312 Harmful in contact with skin.
 H317 May cause an allergic skin reaction.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms, or breathing difficulties if inhaled.
 H336 May cause drowsiness or dizziness.
 H412 Harmful to aquatic life with long lasting effects.

General Statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read carefully and follow all instructions.

Prevention Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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 Statements

P301 + P317	IF SWALLOWED: Get medical help.
P302 + P352	IF ON SKIN: wash with plenty of water and soap.
P303 + P361 + P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P317	Get emergency medical help.
P319	Get medical help if you feel unwell.
P321	Specific treatment is advised - see first aid instructions.
P330	Rinse mouth.
P333 + P317	If skin irritation or rash occurs: Get medical help.
P342 + P316	If experiencing respiratory symptoms: Get emergency medical help immediately.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use appropriate Media for extinction.

Storage Statements

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal Statements

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other Hazards

No information provided.

3. COMPOSITION/INFORMATION OF INGREDIENTS**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	64742-95-6	265-198-5	<60%
PROPRIETARY ISOCYANATE PREPOLYMER	Not Available	Not Available	<60%
2-ETHOXY-1-METHYLETHYL ACETATE	54839-24-6	259-370-9	<10%
HEXAMETHYLENE DIISOCYANATE (HMDI)	822-06-0	212-485-8	<0.5%
PROPRIETARY NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

Ingredient Notes

Ingredients (not listed above) are considered trade secret and determined not to be hazardous, below cut off limits, or do not affect classifications.
The identity of the proprietary ingredient isocyanate prepolymer is withheld. Relevant hazards are disclosed in section 2.

4. FIRST AID MEASURES**4.1 Description of first aid measures**

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a

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Ingestion	Poisons Information Centre or a doctor.
	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	Eye wash facilities and safety shower are recommended.

4.2 Most important symptoms and effects, both acute and delayed

May cause sensitisation by inhalation and skin contact. Individuals with pre-existing respiratory impairment (e.g. asthmatics) or known sensitives to isocyanates should avoid exposure.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide, foam or water fog. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Flammable. May evolve toxic gases (carbon/nitrogen oxides, isocyanates, cyanides, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, pilot lights, heaters, naked lights, mobile phones, etc when handling. Earth containers when dispensing fluids.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

•3Y

•3

Alcohol Resistant Foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

Y

Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover/absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Only trained personnel should undertake clean up.

6.4 Reference to other sections

See sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store tightly sealed in a cool, dry, well ventilated area, removed from incompatible substances, direct sunlight, moisture, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation and fire protection systems.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure Standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
ISOCYANATES, ALL (as-NCO)	SWA (AUS)	-	0.02	-	0.07

Biological Limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

Eye/Face

Wear splash-proof goggles

Hands

Wear viton (R) or nitrile gloves

Body

Wear coveralls.

Respiratory

Wear a Type A (Organic vapour) respirator. If cutting or sanding with potential for dust generation, wear a Type A-Class P1 (Organic gases/vapours and particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	CLEAR LIQUID
Odour	CHARACTERISTIC AROMATOC ODOUR
Flammability	FLAMMABLE
Flash Point	>44°C (cc)
Boiling Point	>170°C
Melting Point	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour Density	>1 (Air = 1)
Specific Gravity	0.95
Solubility (water)	INSOLUBLE
Vapour Pressure	NOT AVAILABLE
Upper Explosion Limit	7%
Lower Explosion Limit	1%
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE
Odour Threshold	NOT AVAILABLE
VOC	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

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10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

May polymerise on contact with water or other materials that react with isocyanates.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), alcohols, amines, heat and ignition sources. Reacts with water or moisture, generating carbon dioxide, which may cause container rupture.

10.6 Hazardous decomposition products

May evolve toxic gases (carbon/nitrogen oxides, isocyanates, cyanides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Harmful if inhaled and/or in contact with skin.

Information available for the ingredients:

Ingredient	Oral Toxicity (LD50)	Dermal Toxicity (LD50)	Inhalation Toxicity (LC50)
HEXAMETHYLENE DIISOCYANATE (HMDI)	350 mg/kg (mouse)	570 uL/kg (rabbit)	30mg/kg

Skin

Contact may result in irritation, redness and rash.

Eye

Contact may result in irritation, lacrimation, pain and redness.

Sensitisation

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to low concentrations of isocyanates may cause asthma-like symptoms, including tightness of the chest, coughing, wheezing and shortness of breath.

Mutagenicity

Insufficient data available to classify as a mutagen.

Carcinogenicity

Insufficient data available to classify as a carcinogen.

Reproductive

Insufficient data available to classify as a reproductive toxin.

STOT - single exposure

Over exposure may result in irritation of the nose and throat, coughing, nausea, dizziness and headache. High level exposure may result in breathing difficulties and unconsciousness.

STOT - repeated exposure

Repeated exposure may damage the respiratory system resulting in irritation of the respiratory tract and lung tissue damage. Repeated exposure to some solvents have been reported to cause adverse effects to the central nervous system (CNS), liver and kidney.

Aspiration

Aspiration into lungs may result in chemical pneumonitis and pulmonary oedema.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

SOIL: If aromatic hydrocarbons are released to soil, they will evaporate from near-surface soil & leach to groundwater.

WATER: Biodegradation of aromatics occurs in soil & groundwater but may be slow. Isocyanates will react with water producing carbon dioxide. ATMOSPHERE: Aromatic hydrocarbons will exist largely as vapour. Half life in atmosphere varies, (e.g. 1-2 days (xylene); 3 hrs-1 day (toluene)).

13. DISPOSAL CONSIDERATIONS

PRODUCT NAME URETHANE 2PACK® PART B HARDENER ANTI-GRAFFITI COATING NS 4500**13.1 Waste treatment methods****Waste disposal**

Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Make sure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required). Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.

Legislation

Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG/IMO)	AIR TRANSPORT (IATA/ICAO)
14.1 UN Number	1263	1263	1263
14.2 Proper Shipping Name	PAINT or PAINT RELATED MATERIAL	PAINT or PAINT RELATED MATERIAL	PAINT or PAINT RELATED MATERIAL
14.3 Transport Hazard Class	3	3	3
14.4 Packing Group	III	III	III

14.5 Environmental hazards

Marine pollutant.

14.6 Special precautions for user**Hazchem code**

+3Y

GTEPG

3C1

EMS

F-E, S-E

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Poison schedule**

Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard Codes

F Flammable
N Dangerous for the environment
Xi Irritant
Xn Harmful

Risk Phrases

R10 Flammable
R20/21 Harmful by inhalation and in contact with the skin.
R42/43 May cause sensitisation by inhalation and skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: May cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.

Safety phrases

S16 Keep away from sources of ignition - No smoking.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

- S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.
- S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Inventory Listings

AUSTRALIA: AICS (Australian Inventory of Chemical Substances)

All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information

WORK PRACTICES - SOLVENTS: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS1020 (The control of undesirable static electricity) and AS1940 (The storage and handling of flammable and combustible liquids) for control procedures.

Spillage decontaminants for isocyanates: For TDI or HMDI, use a mixture of sawdust (20%), silica sand (or china clay or Fuller's Earth) (40%) and breakdown solution (40%). The breakdown solution is made up of water (90%), non-ionic surfactant (2%) and concentrated ammonia (8% v/v). For spillage of any other isocyanate a solid absorbent of silica sand or sawdust may be used.

ISOCYANATES: Asthma sufferers, respiratory impaired or previously sensitised individuals are advised to avoid all exposure to isocyanates. Please note that products containing isocyanates often require the preparation of safe working procedures before product is used.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid all exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE: It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration

LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by DCC in good faith from the best information available at the time of issue. It is based on the present level of research and on behalf of the manufacturer, importer or supplier of the raw materials, or products and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to DCC by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While DCC has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness, since conditions of use are beyond our control. As far as lawfully possible, DCC accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

[END OF SDS]