



SAFETY DATA SHEET ANTI-GRAFFITI CLEAR GLAZE KIT - HARDENER

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

PRODUCT NAME ANTI-GRAFFITI CLEAR GLAZE KIT - HARDENER
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PRODUCT NO. 204/WB101/TKIT - HARDENER
APPLICATION HARDENER FOR TWO COMPONENT ANTI-GRAFFITI COATING
CONTACT PERSON Technical Department - 08.30 - 16.30 hrs Mon - Thurs, 08.30 - 15.00 hrs Fri as above

2 HAZARDS IDENTIFICATION

May cause sensitisation by skin contact.

CLASSIFICATION (1999/45) R43.

HUMAN HEALTH

Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system, cause asthmatic breathing, breathlessness and risk of development of respiratory allergy.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
ALIPHATIC POLYISOCYANATE		28182-81-2	60-100%	R43.
HEXAMETHYLENE-DI-ISOCYANATE	212-485-8	822-06-0	<1%	T;R23 R42/43 Xi;R36/37/38

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION

General first aid, rest, warmth and fresh air. Do not give victim anything to drink if they are unconscious.

INHALATION

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues. Place unconscious person on the side in the recovery position and ensure breathing

INGESTION

DO NOT induce vomiting. Get medical attention immediately. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes and get medical attention.

5 FIRE-FIGHTING MEASURES

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EXTINGUISHING MEDIA

Extinguish with foam, carbon dioxide, dry powder or water fog. Do not use water jet as an extinguisher, as this will spread the fire.

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours. Do not allow runoff to sewer, waterway or ground. Cool containers exposed to flames with water until well after the fire is out.

SPECIFIC HAZARDS

The product is non-combustible. If heated, corrosive and toxic vapours/gases may be formed.

PROTECTIVE MEASURES IN FIRE

Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.

ENVIRONMENTAL PRECAUTIONS

Avoid discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body. Remove mechanically; cover the remainder with wet absorbent material (eg. sawdust, chemical binder based on calcium silicate hydrate, sand). After approximately one hour transfer to waste container and do not seal (evolution of CO₂). Keep damp in a safe ventilated area for several days. Further disposal: Storage on approved landfill or special refuse dump, or by incineration.

SPILL CLEAN UP METHODS

Should be prevented from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Persons susceptible to allergic reactions should not handle this product. Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Avoid inhalation of vapours and spray mists. Do not eat, drink or smoke when using the product. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. The Manual Handling Operations Regulations may apply to the handling of containers of this product. To assist employers, the following method of calculating the weight for any pack size is given. Take the pack size volume in litres and multiply this figure by the specific gravity value given in section 9. This will give the net weight of the coating in kilograms. Allowance will then have to be made for the immediate packaging to give an approximate gross weight.

USAGE DESCRIPTION

Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container

STORAGE PRECAUTIONS

Store in closed original container at temperatures between 5°C and 25°C. Keep away from heat, sparks and open flame. Protect from freezing and direct sunlight. Keep containers tightly closed. Keep upright. Store separated from: Oxidising material. Alkalis. Acids.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
ALIPHATIC POLYISOCYANATE	WEL	0.02 ppm Sen		0.07 ppm Sen		
HEXAMETHYLENE-DI-ISOCYANATE	WEL		0.02 mg/m ³ (Sen)		0.07 mg/m ³ (Sen)	

WEL = Workplace Exposure Limit.

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT



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PROCESS CONDITIONS

Use engineering controls to reduce air contamination to permissible exposure level.

ENGINEERING MEASURES

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

RESPIRATORY EQUIPMENT

It is recommended to use respiratory equipment with combination filter, type A2/P2. In case of inadequate ventilation, use air-supplied full-mask.

HAND PROTECTION

Use protective gloves made of: Rubber, neoprene or PVC.

EYE PROTECTION

Wear approved, tight fitting safety glasses where splashing is probable.

OTHER PROTECTION

Wear appropriate clothing to prevent reasonably probable skin contact.

HYGIENE MEASURES

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear, yellowish liquid		
COLOUR	Light (or pale)		
ODOUR	Slight odour		
SOLUBILITY	Miscible with water		
BOILING POINT (°C)	Not measurable (owing to decomposition at > 150C	RELATIVE DENSITY	approx. 1.15 @ 20 °C
VAPOUR PRESSURE	Hexamethylene-1,6-diisocyanate = 0.014 mbar 25C	VOLATILE BY VOL. (%)	zero
VISCOSITY	approx. 1300 DIN 53019/1 mPas 23C	FLASH POINT (°C)	approx. 180C OC (Open cup).
VOLATILE ORGANIC COMPOUND (VOC)	0		

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Avoid exposure to high temperatures or direct sunlight. Exothermic reaction with amines and alcohols; reacts slowly with water forming CO₂, in closed containers risk of bursting owing to increase of pressure. The release of hexamethylene diisocyanate is to be expected when force drying aqueous overcrosslinked coating systems at temperatures of 90C and above

MATERIALS TO AVOID

Strong alkalis. Strong acids. Strong oxidising substances.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 > 5000 mg/kg (oral rat)

TOXICOLOGICAL INFORMATION

Skin and mucous membrane compatibility, rabbit: Skin - 4 hours exposure - very slight irritant. Eyes - very slight irritant. No pulmonary sensitisation observed in animal tests. No pulmonary sensitisation potential was observed in the guinea pig model after either intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate. Skin sensitisation according to Buehler (epicutaneous test). In the guinea pig the product did not show a sensitising effect. Skin sensitivity according to Magnusson/Kligmann (maximising test). In the guinea pig the product has a sensitising effect. Salmonella/microsome test (Ames test). No indication of mutagenic effects.

GENERAL INFORMATION

Preparation contains small volumes of isocyanate which may cause allergic reaction and irritation of respiratory system.

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INHALATION

Vapours may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness. May cause sensitisation by inhalation.

INGESTION

No harmful effects expected in amounts likely to be ingested by accident.

SKIN CONTACT

Prolonged contact may cause redness and irritation.

EYE CONTACT

May cause temporary eye irritation.

HEALTH WARNINGS

Over exposure, especially during spraying operations without necessary precautions, entails risk of concentration-dependent irritating effects on eyes, nose, throat and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficulty breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from effects even at low isocyanate concentrations

MEDICAL CONSIDERATIONS

Skin disorders and allergies.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Do not allow to escape into waters, wastewater or soil. The resin reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (eg. detergents) or by water soluble solvents.

MOBILITY

The product is non-volatile.

DEGRADABILITY

No data available.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Waste is classified as hazardous waste.

DISPOSAL METHODS

INCINERATE. Dispose of waste and residues in accordance with local authority requirements. Empty containers may be disposed of after neutralising any product remaining on the walls of the container with a mixture of isopropanol, ammonia and water. Afterwards remove warning labels.

WASTE CLASS

When this coating, in its liquid state, as supplied, becomes a waste, it is categorised as non-hazardous waste, with code 08 01 12 (WATER BASED LIQUID WASTE). Part used containers, not drained and/or rigorously scraped out and containing dry residues of the supplied coating, are categorised as non-hazardous waste, with code 08 01 12 (WATER BASED LIQUID WASTE). If mixed with other wastes, the above waste code may not be applicable. Used containers, drained and/or rigorously scraped out and containing dry residues of the supplied coating, are categorised as non-hazardous waste, with code 15 01 02 (plastic packaging) or 15 01 04 (metal packaging).

14 TRANSPORT INFORMATION

GENERAL

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

No transport warning sign required.

15 REGULATORY INFORMATION

LABELLING



Irritant

CONTAINS

ALIPHATIC POLYISOCYANATE

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RISK PHRASES

R43 May cause sensitisation by skin contact.

SAFETY PHRASES

S2 Keep out of the reach of children.
S46 If swallowed, seek medical advice immediately and show this container or label.
S56 Dispose of this material and its container to hazardous or special waste collection point.
P4 Contains isocyanates. See information supplied by the manufacturer.
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.
S28 After contact with skin, wash immediately with plenty of water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

UK REGULATORY REFERENCES

Chemicals (Hazard Information & Packaging) Regulations. The Control of Substances Hazardous to Health Regulations 1988. Health and Safety at Work Act 1974.

ENVIRONMENTAL LISTING

Control of Pollution Act 1974. Rivers (Prevention of Pollution) Act 1961.

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.

APPROVED CODE OF PRACTICE

Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.

GUIDANCE NOTES

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

NATIONAL REGULATIONS

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40) Health and Safety at Work Act (As Amended) 1974 Control of Substances Hazardous to Health Regulations 2002 (as amended) The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007 (CDG 2007) The Manual Handling Operations Regulations 1992 [SI 1992:2793]

16 OTHER INFORMATION

GENERAL INFORMATION

Only trained personnel should use this material.

REVISION COMMENTS

Issued in new format for Reach compliance Issued in compliance with 30th & 31st ATP to Council Directive 67/548, as detailed in Commission Directive 2004/73/EC (1st ATP of EC Regulation 1272/2008)

ISSUED BY

Technical Dept. (P.E.)

REVISION DATE 08/01/2010

REV. NO./REPL. SDS GENERATED 3

SDS NO. 10755

SAFETY DATA SHEET STATUS

Approved.

DATE Date printed _____

SIGNATURE Initials _____

RISK PHRASES IN FULL

R36/37/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitisation by inhalation and skin contact.
R43 May cause sensitisation by skin contact.
R23 Toxic by inhalation.

DISCLAIMER

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.