

Graffitex – Part A



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SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND THE COMPANY

Product Name: **GRAFFITEX – PART A**
 Company Name: Polycote UK
 Centre Point • Wolseley Road
 Woburn Road Industrial Estate
 Kempston • Beds MK42 7EF
 Telephone Number: 01234 846400

SECTION 2: HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
 Eye Irrit. 2, H319

Hazard pictograms:

Signal word: Warning
 Hazard statements: Causes serious eye irritation.
 Precautionary statements:
 Prevention: P280 - Wear eye or face protection: safety glasses with side-shields.
 P264 - Wash thoroughly after handling.
 Response: P305 - IF IN EYES: Rinse cautiously with water for several minutes.
 P338 - Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 - If eye irritation persists: Get medical attention.
 Storage: Not applicable.
 Disposal: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
 Hazardous ingredients: butan-1-ol

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	Index No.	%	Classification	Type
butan-1-ol	71-36-3	200-751-6	603-004-00-6	≥1 - <3	Flam. Liq. 3 H226; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3, H335; STOT SE 3, H336	[1] [2]
hydroxyphenyl-benzotriazole derivative A polymer	104810-47-1	400-830-7	607-176-00-3	≥0.3 - <1	Skin Sens. 1, H317	[1]
1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9	613-088-00-6	≥0.01 - <0.1	Skin Irrit. 2, H315; Eye Dam 1, H318 Skin Sens. 1, H317; Aquatic Acute 1, H400	[1]

[1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 Occupational exposure limits, if available, are listed in section 8.
 See section 16 for full text of Hazard Statements.

SECTION 4: FIRST AID MEASURES

General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
 Eye Contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if irregular breathing or respiratory arrest occurs provide artificial respiration or oxygen by trained personnel.
 Skin Contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleaner. Do NOT use solvents or thinners.
 Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

There are no data available on the preparation itself. See sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains hydroxyphenyl-benzotriazole derivative A polymer, 1,2-benzisothiazol-3(2H)-one, Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media:
 Recommended: alcohol resistant foam, CO₂, powders, water spray.
 Not to be used: water jet.

Recommendations:
 Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or waterways.

Hazardous combustion products:
 Decomposition products may include the following materials:
 carbon dioxide; carbon monoxide; smoke; oxides of nitrogen

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:
 Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

Environmental Precautions:
 Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spill: Contain and collect spillage with non-combustible, absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Preferably clean with a detergent. Avoid using solvents. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

Handling: Due to the organic solvents content of the mixture: Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Storage: Store in accordance with local regulations. Observe label precautions. Do not store below 0°C (32°F). Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep away from heat and direct sunlight. Keep container tightly closed.

Keep away from: oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not empty into drains.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient name	Occupational exposure limits
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 12/2011)
	Absorbed through skin.
	STEL: 154 mg/m ³ 15 minute(s)
	STEL: 50 ppm 15 minute(s)

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere 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. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

DNELs/DMELs:

Product	Type Exposure	Value	Population	Effects
butan-1-ol	DNEL Long term Inhalation	310 mg/m ³	Workers	Local
	DNEL Long term Inhalation	55 mg/m ³	Consumers	Local
	DNEL Long term Oral	3.125 mg/kg bw/day	Consumers	Systemic

PNECs:

Product	Compartment Detail	Value	Method Detail
butan-1-ol	Fresh water	0.082 mg/l	–
	Marine	0.0082 mg/l	–
	Fresh water sediment	0.178 mg/kg	–
	Marine water sediment	0.0178 mg/kg	–
	Soil	0.015 mg/kg	–
	Sewage Treatment Plant	2476 mg/l	–

Appropriate engineering controls:

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:

Safety glasses with side shields (EN166).

Hands:

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves:

Recommended: nitrile rubber.

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

Body:

Recommended: Wear overalls or long sleeved shirt. (EN 467).

Other:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Recommended: During fumigation/spraying wear suitable respiratory equipment. Organic vapour filter (Type A) (EN 141).

Environmental exposure controls:

Do not allow to enter drains or watercourses.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Colourless
pH:	8 to 9
Boiling point:	>100°C
Vapour pressure:	2,3 kPa (20°C)
Vapour density:	>1 (Air = 1)
Evaporation rate (BuAc=1):	<1 (butyl acetate = 1)
Volatility (%):	75% (v/v), 72% (w/w)
Viscosity:	Dynamic 2000 to 2500 mPa·s
Relative density (kg/L):	1,02 to 1,05
Solubility:	Soluble in the following materials: cold water and hot water.
	Very slightly soluble in the following materials: methanol and acetone.
	Insoluble in the following materials: n-octanol.

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SECTION 10: STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage and handling conditions (see section 7).
Hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials:	Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO2 and smoke can be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See sections 2 and 3 for details.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains hydroxyphenyl-benzotriazole derivative A polymer, 1,2-benzisothiazol-3(2H)-one, Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Acute Toxicity

Ingred. name	Result	Species	Dose	Exposure
butan-1-ol	LC50 Inhalation Vapour	Rat	25 mg/L	4 hours
	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LC50 Inhalation Vapour	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	–
	LD50 Oral	Rat	0.79 g/kg	–
hydroxyphenyl-benzotriazole derivative A polymer	LD50 Dermal	Rat	>2000 mg/kg	–
	LD50 Oral	Rat	>5000 mg/kg	–
1,2-benzisothiazol-3(2H)-one	LD50 Oral	Rat	1020 mg/kg	–

Irritation/Corrosion

Ingred. name	Result	Species	Score	Exposure
butan-1-ol	Eyes – Severe irritant	Rabbit	–	24 hrs 2 milligrams
	Eyes – Severe irritant	Rabbit	–	0.005 Milliliters
	Skin – Moderate irritant	Rabbit	–	24 hrs 20 milligrams
hydroxyphenyl-benzotriazole derivative A polymer	Skin – Oedema	Rabbit	0	–
	Eyes – Cornea opacity	Rabbit	0	–
1,2-benzisothiazol-3(2H)-one	Skin – Mild irritant	Human	–	48 hours 5 percent

Sensitisation

Ingred. name	Route of exposure	Species	Result
hydroxyphenyl-benzotriazole derivative A polymer	Skin	Guinea pig	Sensitising

Mutagenicity

Ingred. name	Test	Experiment	Result
butan-1-ol	OECD 471 Bacterial Reverse Mutation Test	Subject: Bacteria	Negative
	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

Specific target organ toxicity (single exposure)

Ingred. name	Category	Route of Exposure	Result
butan-1-ol	Category 3	Not applicable	Respiratory tract, irritation and Narcotic effects

SECTION 12: ECOLOGICAL INFORMATION

There are no data available on the preparation itself. Do not allow to enter drains or watercourses.

Aquatic ecotoxicity

Ingredient name	Result	Species	Exposure
butan-1-ol	Acute EC50 2072 to 1983000 µg/l Fresh water	Daphnia spec. – Daphnia magna	48 hours
	Acute LC50 1940000 µg/l Fresh water	Fish – Pimephales promelas – Juvenile (Fledgling, Hatching, Weanling)	96 hours
	Acute EC50 >9 mg/l	Aquatic plants	72 hours
hydroxyphenyl-benzotriazole derivative A polymer	Acute EC50 4 mg/l	Daphnia spec.	48 hours
	Acute LC50 2.8 mg/l	Fish	96 hours
1,2-benzisothiazol-3(2H)-one	Acute EC50 0.067 mg/l	Algae – Pseudokirchneriella subcapitata	72 hours
	Acute EC50 4.4 to 4.9 ppm Fresh water	Daphnia spec. – Daphnia magna	48 hours
	Acute LC50 1.6 to 2.8 ppm Fresh water	Fish – Oncorhynchus mykiss	96 hours

Persistence and degradability

Ingredient name	Test	Result	Dose	Inoculum
butan-1-ol	OECD 301B	>70% – Readily – 19 days	–	–
1,2-benzisothiazol-3(2H)-one	OECD 303A	>90% – Readily – 1 day	–	–

Conclusion/Remark: According to EC Criteria: Expected to be inherently biodegradable.

Ingredient name	Aquatic half-life	Photolysis	Biodegradability
butan-1-ol	–	–	Readily
hydroxyphenyl-benzotriazole derivative A polymer	–	–	Not readily
1,2-benzisothiazol-3(2H)-one	–	–	Readily

Bioaccumulative potential

Ingredient name	LogP _{ow}	BCF	Potential
butan-1-ol	0,8	–	low
1,2-benzisothiazol-3(2H)-one	0,64	–	low

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SECTION 13: DISPOSAL CONSIDERATIONS

Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste: Yes.

European waste catalogue (EWC):

The European Waste Catalogue classification of this product, when disposed of as waste, is 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances.

If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the produce know what to do in the event of an accident or spillage.

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Additional information
ADR/RID Class	Not regulated	-	-	-	-
IMDG Class	Not regulated	-	-	-	-
IATA Class	Not regulated	-	-	-	-

PG* – Packing group

This product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA.

SECTION 15: REGULATORY INFORMATION

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

CN Code: 3209 10 00

EU Regulation (EC) No. 1907/2006 (REACH)

VOC for Ready-for-Use Mixture:

2004/42/EC – IIA/j: 140g/l (2007) 140g/l (2010). <= 20g/l VOC.

SECTION 16: OTHER INFORMATION

Full text of abbreviated H statements:

H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H302 (oral) Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H400 Very toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.

The Safety Data above is applicable to the product only as used according to the purposes and methods described on the relevant Technical Data Sheet, available from Polycote UK on request.

The information above is based on our present knowledge and is believed to be correct but does not purport to be all inclusive and should only be used as a guide. No warranty is implied with respect to the specification of the product. It is intended to describe the product solely in terms of its safety requirements and relates only to the specific material designed and may not be valid for such material used in combination with any other materials or in any process. This data does not constitute the users own assessment of workplace risk as required by other Health and Safety legislation, nor is it a sales specification or indication of suitability for any particular use. The user must satisfy himself as to the suitability of the product for his purpose. No legally valid contractual relationship is established by the above data, and Polycote UK shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of Issue: February 2018

Graffitex – Part B



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SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND THE COMPANY

Product Name: **GRAFFITEX – Part B**
 Company Name: Polycote UK
 Centre Point • Wolseley Road
 Woburn Road Industrial Estate
 Kempston • Beds MK42 7EF
 Telephone Number: 01234 846400

SECTION 2: HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
 Acute Tox. 4, H332
 Skin Sens. 1B, H317
 STOT SE 3, H335
 Aquatic Chronic 3, H412
 The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Hazard pictograms:

Signal word: Warning
 Hazard statements: Harmful if inhaled.
 May cause an allergic skin reaction.
 May cause respiratory irritation.
 Harmful to aquatic life with long lasting effects.

Precautionary statements:
 Prevention: P280 Wear protective gloves: butyl rubber or nitrile rubber. Avoid breathing spray.
 P261 Avoid breathing spray.
 P271 - Use only outdoors or in a well-ventilated area.
 Response: P302 IF ON SKIN: Rinse skin with water or shower. If skin irritation or rash occurs: Get medical attention.
 Storage: P405 Store locked up.
 Disposal: P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
 Contains isocyanates. May produce an allergic reaction.

Other hazards: Unstable. Sensitive to heat or shock. May become explosive.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	EC No.	CAS No.	%	Classification 1272/2008 (CLP)	Type
HDI polyisocyanate.	-	160994-68-3	>=90	Acute Tox. 4, H332 Skin Sens. 1B, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	[1]
hexamethylene-diisocyanate	212-485-8	822-06-0	≥0.1 - <0.3	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	[1][2]

See section 16 for the full text of Hazard statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if applicable, are listed in section 8.

SECTION 4: FIRST AID MEASURES

General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye Contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if irregular breathing or respiratory arrest occurs provide artificial respiration or oxygen by trained personnel.

Skin Contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleaner. Do NOT use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Most important symptoms and effects, both acute and delayed:

There are no data available on the preparation itself. See sections 2 and 3 for details.

If splashed in the eyes, the liquid may cause irritation and reversible damage. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in nonallergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains HDI polyisocyanate, hexamethylene-di-isocyanate. May produce an allergic reaction.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media:

Recommended: alcohol resistant foam, CO₂, powders, water spray or mist. Not to be used: water jet.

Recommendations:

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or waterways.

Hazardous decomposition products:

Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions:**

Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

Spill: Contain and collect spillage with non-combustible, absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Please in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. Clean, preferably with a detergent, avoid use of solvents. If the product contaminates lakes, rivers or sewers, inform the appropriate authorities in accordance with local regulations.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

Persons with a history of asthma, allergies or chronic respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Handling: Care should be taken when re-opening partly-used containers. Precautions should be taken to minimize exposure to atmospheric humidity or water. CO₂ will be formed, which, in close containers, could result in pressurisation. Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates and spray or mist, arising from the application of this preparation. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Storage: Store in accordance with local regulations. Observe label precautions. Store in a dry, cool, well-ventilated area away from incompatible materials and ignition sources. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water.

No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Do not empty into drains.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient name	Occupational exposure limits
hexamethylene-di-isocyanate	EH40/2005 WELs (United Kingdom (UK), 12/2011) Skin sensitiser. STEL: 0.07 mg/m ³ (as NCO) 15 minute(s) TWA: 0.02 mg/m ³ (as NCO) 8 hour(s)

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere 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. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels:

Product	Type	Exposure	Value	Population	Effects
hexamethylene-di-isocyanate					
	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	0.5 mg/m ³	Workers	Local

Predicted effect concentrations:

Product	Type	Compartment Detail	Value	Method Detail
hexamethylene-di-isocyanate				
	PNEC	Fresh water	0.127 mg/l	-
	PNEC	Marine	0.0127 mg/l	-
	PNEC	Sediment	266700 mg/kg dwt	-
	PNEC	Soil	53182 mg/kg dwt	-
	PNEC	Sewage Treatment Plant	38.28 mg/l	-

Exposure controls/personal protection**Appropriate engineering controls:**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Personal protection.)

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:

Safety glasses with side shields (EN166).

Hands: Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Gloves: Recommended: > 8 hours (breakthrough time): butyl rubber (0.6 mm) or nitrile rubber (0.5mm).

The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN 374-3 : 2003

Body: Recommended: Wear overalls or long sleeved shirt (EN 467).

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SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION – Cont.

Skin: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: During fumigation/spraying wear suitable respiratory equipment. supplied-air respirator By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Filter type: (A2-P2)(EN 140) .

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Do not allow to enter drains or watercourses.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid
Odour:	Odourless
Colour:	Yellowish
pH:	8
Flash point:	Closed cup: Not applicable.
Initial Boiling point:	Decomposition temperature: >200°C (>392°F)
Auto-ignition temperature:	465°C
Decomposition temperature:	>200°C
Viscosity:	Dynamic 3300 mPa·s (3300 cP)
Relative density (kg/L):	1,13

SECTION 10: STABILITY AND REACTIVITY

Chemical stability:

Stable under recommended storage and handling conditions (see section 7).

Possibility of hazardous reactions:

Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions may include the following: shock, friction, high temperature

Reactions may include the following: risk of explosion

Conditions to avoid:

In a fire, hazardous decomposition products may be produced. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Incompatible materials:

Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See sections 2 and 3 for details.

If splashed in the eyes, the liquid may cause irritation and reversible damage. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in nonallergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains HDI polyisocyanate, hexamethylene-di-isocyanate. May produce an allergic reaction.

Acute Toxicity

Ingred. name	Result	Species	Dose	Exposure
HDI polyisocyanate	LC50 Inhalation Dusts and mists	Rat Female	0.39 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	–
hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	Rat	462 mg/m ³	4 hours
	LC50 Inhalation Vapour	Rat	124 mg/m ³	4 hours
	LCLo Inhalation Vapour	Rat	60 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>7000 mg/kg	–

Irritation/Corrosion

Ingred. name	Result	Species	Score
HDI polyisocyanate	Skin – Primary dermal irritation index (PDII)	Rabbit	1
hexamethylene-diisocyanate	Skin – Erythema/Eschar	Rabbit	3
	Eyes – Redness of the conjunctivae	Rabbit	3

Sensitisation

Ingred. name	Route of exposure	Species	Result
HDI polyisocyanate	Skin	Guinea pig	Sensitising
	Respiratory	Guinea pig	Not sensitising
hexamethylene-diisocyanate	Skin	Guinea pig	Sensitising
	Respiratory	Guinea pig	Sensitising

Conclusion: May cause an allergic skin reaction.

Mutagenicity

Ingred. name	Test	Experiment	Result
HDI polyisocyanate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
hexamethylene-diisocyanate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vitro Subject: Mammalian-Animal	Negative

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SECTION 11: TOXICOLOGICAL INFORMATION – Cont.**Specific target organ toxicity (single exposure)**

Ingred. name	Category	Route of exposure	Score
HDI polyisocyanate	Category 3	Not applicable.	Respiratory tract irritation
hexamethylene-di-isocyanate	Category 3	Not applicable.	Respiratory tract irritation

SECTION 12: ECOLOGICAL INFORMATION

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Aquatic ecotoxicity

Ingredient name	Result	Species	Exposure
HDI polyisocyanate	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Algae – <i>Scenedesmus subspicatus</i>	72 hours
	Acute LC50 28.3 mg/l	Fish	96 hours
hexamethylene-di-isocyanate	Acute EC50 842 mg/l	Bacteria	3 hours
	Acute EC50 >77.4 mg/l	Algae – <i>Scenedesmus subspicatus</i>	72 hours

Conclusion/Summary: Harmful to aquatic life with long lasting effects.

Persistence and degradability

Ingredient name	Test	Result	Dose	Inoculum
HDI polyisocyanate	OECD 301F	2% – Not readily – 28 days	–	–
hexamethylene-di-isocyanate	OECD 301F	42% – 10 days	–	–
	EU 301F Ready Biodegradability – Manometric Respirometry Test	42% – 28 days	–	–

Conclusion/Remark: This product has not been tested for biodegradation.

Ingredient name	Aquatic half-life	Photolysis	Biodegradability
HDI polyisocyanate	–	–	Not readily
hexamethylene-di-isocyanate	–	–	Not readily

Bioaccumulative potential

Ingredient name	LogP _{ow}	BCF	Potential
hexamethylene-di-isocyanate	1,08	–	low

Mobility: Non-volatile liquid.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.
Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Hazardous waste:

Yes.

European waste catalogue (EWC):

The European Waste Catalogue classification of this product, when disposed of as waste, is 08 01 15* aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances.

Disposal considerations:

Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.

Empty containers must be scrapped or reconditioned.

Not emptied containers are hazardous waste.

SECTION 14: TRANSPORT INFORMATION

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the produce know what to do in the event of an accident or spillage.

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Additional information
ADR/RID Class	Not regulated	–	–	–	–
IMDG Class	Not regulated	–	–	–	–
IATA Class	Not regulated	–	–	–	–

PG* – Packing group

This product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA.

SECTION 15: REGULATORY INFORMATION

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

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

CN code:

3909 30 00

EU Regulation (EC) No. 1907/2006 (REACH)

VOC for Ready-to-Use Mixture:

2004/42/EC – IIA/j: 140g/l (2007) 140g/l (2010). ≤ 20g/l VOC.

Industrial use:

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

SECTION 16: OTHER INFORMATION

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Acute Tox. 4, H332	On basis of test data
Skin Sens. 1B, H317	Expert judgment
STOT SE 3, H335	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

Full text of abbreviated H statements:

- H315 – Causes skin irritation.
- H317 – May cause an allergic skin reaction.
- H319 – Causes serious eye irritation.
- H330 – Fatal if inhaled.
- H332 – Harmful if inhaled.
- H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 – May cause respiratory irritation.
- H412 – Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]:

Acute Tox. 1, H330	ACUTE TOXICITY: INHALATION – Category 1
Acute Tox. 4, H332	ACUTE TOXICITY: INHALATION – Category 4
Aquatic Chronic 3, H412	AQUATIC TOXICITY (CHRONIC) – Category 3
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION – Category 2
Resp. Sens. 1, H334	RESPIRATORY SENSITIZATION – Category 1
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION – Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION – Category 1
Skin Sens. 1B, H317	SKIN SENSITIZATION – Category 1B
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] – Category 3

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SECTION 16: OTHER INFORMATION – Cont.

The Safety Data above is applicable to the product only as used according to the purposes and methods described on the relevant Technical Data Sheet, available from Polycote UK on request.

The information above is based on our present knowledge and is believed to be correct but does not purport to be all inclusive and should only be used as a guide. No warranty is implied with respect to the specification of the product. It is intended to describe the product solely in terms of its safety requirements and relates only to the specific material designed and may not be valid for such material used in combination with any other materials or in any process. This data does not constitute the users own assessment of workplace risk as required by other Health and Safety legislation, nor is it a sales specification or indication of suitability for any particular use. The user must satisfy himself as to the suitability of the product for his purpose. No legally valid contractual relationship is established by the above data, and Polycote UK shall not be held liable for any damage resulting from handling or from contact with the above product.

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