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

1.1 Product identifier

Trade name/designation: Caltech UV - RAL 7037.

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

Relevant identified uses: Liquid Roof Coating,

Recommended restrictions: Reserved for industrial and professional use.

1.3 Supplier details

Alumasc Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, United Kingdom, WA9 4JG
Tel: +44 (0)1744 648400
e-mail: technical@alumascroofing.com

1.4 Emergency telephone number

Association / Organisation:National Poisons Information Service
Emergency telephone numbers:0344 892 0111 (Healthcare professionals only)
Other emergency telephone numbersAlumasc Building Products: +44 17 4464 8400
(Mon-Thurs – 08.30-17.00 Fri – 08.30-16.00)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictures:

Signal word: Warning.

Hazard statements:
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
EUH204 Contains isocyanates. May produce an allergic reaction.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing / eye protection / face protection.
P370+P378 In case of fire: use carbon dioxide, sand, foam or powder to extinguish.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P337+P313 If eye irritation persists: Get medical advice / attention.

Precautionary statements disposal: P501: Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Contains: Aromatic Polyisocyanic Prepolymer.

VOC (Directive 2004/42/EC): One - pack performance coatings.
VOC given in g/litre of product in a ready-to-use condition: 205,42.
Limit value: 500,00.

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2.

3.2 Mixtures

Identification		x = Conc. %	Classification (EC) 1272/2008 (CLP)
Aromatic Polyisocyanic Prepolymer:			
Index		18 ≤ x < 19,5	Eye Irrit. 2 H319, Skin Sens. 1 H317
EC	609-378-7		
CAS	37273-56-6		
REACH Reg.	-		
Xylene (mixture of Isomers):			
Index	601-022-00-9	8,5 ≤ x < 10	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l
EC	215-535-7		
CAS	1330-20-7		
REACH Reg.	01-2119488216-32		
Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:			
Index	-	4 ≤ x < 4,5	Acute Tox. 4 H302, Aquatic Chronic 3 H412, LD50 Oral: 632 mg/kg bw
EC	807-935-0		
CAS	1244733-77-4		
REACH Reg.	01-2119486772-26		
N,N-Dibenzyliden Polyoxypropylene Diamine (Polymer):			
Index	-	2 ≤ x < 2,5	Skin Irrit. 2 H315
EC	679-523-7		
CAS	136855-71-5		
REACH Reg.	-		
Isobutyl Acetate:			
Index	607-026-00-7	1 ≤ x < 1,5	Flam. Liq. 2 H225, STOT SE 3 H336, EUH066, Classification note according to Annex VI to the CLP Regulation: C
EC	203-745-1		
CAS	110-19-0		
REACH Reg.	01-2119488971-22		
Antimony Trioxide:			
Index	051-005-00-X	0,25 ≤ x < 0,3	Carc. 2 H351
EC	215-175-0		
CAS	1309-64-4		
REACH Reg.	01-2119475613-35		
N-Butyl Acetate:			
Index	607-025-00-1	0,25 ≤ x < 0,3	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC	204-658-1		
CAS	123-86-4		
REACH Reg.	01-2119485493-29		

Reaction products of Hexane-1,6-Diol with 2-(Chloromethyl)Oxirane (1:2):			
Index	-	0,1 ≤ x < 0,15	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC	618-939-5		
CAS	933999-84-9		
REACH Reg.	01-2119463471-41		
Phosphoric Acid:			
Index	015-011-00-6	0 ≤ x < 0,05	Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, Classification note according to Annex VI to the CLP Regulation: B Skin Corr. 1B H314: ≥ 25%, Skin Irrit. 2 H315: ≥ 10%, Eye Dam. 1 H318: ≥ 25%, Eye Irrit. 2 H319: ≥ 10%
EC	231-633-2		
CAS	7664-38-2		
REACH Reg.	01-2119485924-24		
Dibutylbis(Dodecylthio)Stannane:			
Index	-	0 ≤ x < 0,05	Repr. 1B H360FD, Acute Tox. 4 H312, STOT RE 1 H372, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410 M=1 LD50 Dermal: >1000 mg/kg
EC	214-688-7		
CAS	1185-81-5		
REACH Reg.	01-2119841260-50		
M-Tolylidene Diisocyanate:			
Index	615-006-00-4	0 ≤ x < 0,05	Carc. 2 H351, Acute Tox. 2 H330, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: 2, C Resp. Sens. 1 H334: ≥ 0,1% STA Inhalation vapours: 0,501 mg/l
EC	247-722-4		
CAS	26471-62-5		
REACH Reg.	-		

The full wording of hazard (H) phrases is given in Section 16 of the sheet.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

Skin contact: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

Inhalation: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

Ingestion: Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3 Indication of any immediate medical attention and special treatment needed.

Information not available.

5. FIRE-FIGHTING MEASSURES

5.1 Extinguishing media

Suitable extinguishing media:
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

Extinguishing media which must not be used for safety reasons:
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2 Special hazards arising from the substance or mixture

Hazards caused by exposure in the event of fire:
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3 Advice for fire-fighters

General information:
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

Special protective equipment for fire-fighters:
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.
Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2 Environmental Precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in Section 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges.
When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details..

7.3 Specific end use(s)

Information not available.

Recommended storage temperature:
Keep in a dry, cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Regulatory References:

GBR United Kingdom: EH40/2005 Workplace exposure limits (Fourth Edition 2020).
EU OEL EU : Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.

Xylene (mixture of Isomers):

Threshold Limit Value						
Type	**Country**	**TWA/8h**		**STEL/15min**		**Remarks / Observations**
		mg/m3	**ppm**	**mg/m3**	**ppm**	
WEL	GBR	220	50	441	100	Skin
OEL	EU	221	50	442	100	Skin
TLV-ACGIH			20			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg

Health - Derived no-effect level - DNEL / DMEL:

	Effects on consumers				**Effects on workers**			
Route of exposure	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**
Oral								
Inhalation					442 mg/m3	442 mg/m3	221 mg/m3	221 mg/m3
Skin								212 mg/kg bw/d

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,32	mg/l
Normal value in marine water	0,032	mg/l
Normal value for fresh water sediment	11,5	mg/kg dw
Normal value for marine water sediment	1,15	mg/kg dw
Normal value for marine water, intermittent release	0,51	mg/l
Normal value of STP microorganisms	19,1	mg/l
Normal value for the food chain (secondary poisoning)	11,6	mg/kg
Normal value for the terrestrial compartment	0,34	mg/kg dw
Normal value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL:

	Effects on consumers				**Effects on workers**			
Route of exposure	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**
Oral		2 mg/kg bw/d		0,520 mg/kg bw/d				
Inhalation	NPI	5,6 mg/m3	NPI	1,45 mg/m3	NPI	22,6 mg/m3	NPI	8,2 mg/m3
Skin	NPI		NPI	1,04 mg/kg bw/d	NPI		NPI	2,91 mg/kg bw/d

Hydrocarbons, C9, Aromatics:

Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				7,5 mg/kg bw/d				
Inhalation				32 151 mg/m3				
Skin				7,5 mg/kg bw/d				

Isobutyl Acetate:

Threshold Limit Value						
Type	Country	TWA/8h mg/m3	TWA/8h ppm	STEL/15min mg/m3	STEL/15min ppm	Remarks / Observations
WEL	GBR	724	150	903	187	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

Predicted no-effect concentration – PNEC		
Normal value in fresh water	0,17	mg/l
Normal value in marine water	0,017	mg/l
Normal value for fresh water sediment	0,877	mg/kg
Normal value for marine water sediment	0,88	mg/kg
Normal value of STP microorganisms	200	mg/l
Normal value for the terrestrial compartment	0,0755	mg/kg

Health - Derived no-effect level - DNEL / DMEL:

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral								
Inhalation					600 mg/m3	600 mg/m3	300 mg/m3	300 mg/m3
Skin						10 mg/kg bw/d		10 mg/kg bw/d

Phosphoric Acid:

Threshold Limit Value						
Type	Country	TWA/8h mg/m3	TWA/8h ppm	STEL/15min mg/m3	STEL/15min ppm	Remarks / Observations
WEL	GBR	1		2		
OEL	EU	1		2		
TLV-ACGIH		1		3		

Dibutylbis(Dodecylthio)Stannane:

Threshold Limit Value						
Type	Country	TWA/8h mg/m3	TWA/8h ppm	STEL/15min mg/m3	STEL/15min ppm	Remarks / Observations
OEL	EU	0,1		0,2		

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,18	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	0,981	mg/kg
Normal value for marine water sediment	0,098	mg/kg
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,09	mg/kg

Health - Derived no-effect level - DNEL / DMEL:

Effects on consumers					Effects on workers			
Route of exposure	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**
Oral								
Inhalation					600 mg/m3	600 mg/m3	300 mg/m3	300 mg/m3
Skin						10 mg/kg bw/d		10 mg/kg bw/d

N-Butyl Acetate:

Threshold Limit Value						
Type	**Country**	**TWA/8h**		**STEL/15min**		**Remarks / Observations**
		mg/m3	**ppm**	**mg/m3**	**ppm**	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

M-Tolylidene Diisocyanate:

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0125	mg/l
Normal value in marine water	0,00125	mg/l
Normal value for fresh water sediment	NEA	
Normal value for marine water sediment	NEA	
Normal value for marine water, intermittent release	0,125	mg/l
Normal value of STP microorganisms	1	mg/l
Normal value for the food chain (secondary poisoning)	NPI	
Normal value for the terrestrial compartment	1	mg/kg/d
Normal value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL:

Effects on consumers					Effects on workers			
Route of exposure	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**
Oral								
Inhalation					0,140 mg/m3	0,140 mg/m3	0,035 mg/m3	0,035 mg/m3
Skin	MED	MED	MED	MED	MED	MED	MED	MED

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2 Exposure controls

8.2.1. Appropriate engineering controls	As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. When choosing personal protective equipment, ask your chemical substance supplier for advice. Personal protective equipment must be CE marked, showing that it complies with applicable standards. Provide an emergency shower with face and eye wash station.
8.2.2. Personal protection	
Eye and face protection:	Wear airtight protective goggles (see standard EN 166).
Skin protection:	Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344).

Hands/feet protection:	Protect hands with category III work gloves. The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
Body protection:	Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.
Respiratory protection:	RESPIRATORY PROTECTION If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited. If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
General protective and hygiene measures:	Wash body with soap and water after removing protective clothing.
Environmental exposure controls:	The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards. Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

APPEARANCE	Liquid
COLOUR	Gray
ODOUR	Characteristic
MELTING POINT/FREEZING POINT	Not applicable
BOILING POINT/RANGE	287 °C Method: OECD 103
FLASH POINT	33 °C Method: EN ISO 3679
FLAMMABILITY	flammable liquid
UPPER EXPLOSION LIMIT	Not available
LOWER EXPLOSION LIMIT	Not available
VAPOUR PRESSURE	Not available
SOLUBILITY	reacts with water developing carbon dioxide
PARTITION CO-EFFICENT: n-octanol/water	Not available
AUTO-IGNITION TEMPERATURE	Not available
DECOMPOSITION TEMPERATURE	Not available
pH	Not applicable
KINEMATIC VISCOSITY	15000 MM2/S Temperature: 20 °C
DYNAMIC VISCOSITY	18000 mPa*s Temperature: 20 °C
DENSITY AND/OR RELATIVE DENSITY	1,5 g/cm3 Temperature: 20 °C
RELATIVE VAPOUR DENSITY	Not available
PARTICLE CHARACTERISTICS	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information not available.

9.2.2 Other safety characteristics

Total solids (250°C / 482°F):	79,48%.
VOC (Directive 2004/42/EC):	13,69% - 205,42 g/litre.
Explosive properties:	Not expected.
Oxidising properties:	Not expected.

10. STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

Isobutyl Acetate:
Decomposes under the effect of heat. Attacks various types of plastic materials.

N-Butyl Acetate:
Decomposes on contact with water.

Phosphoric Acid:
Decomposes at temperatures above 200°C/392°F.

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

Reaction Products Of Phosphoryl Trichloride And 2-Methyloxirane:
Stable in normal conditions of use and storage.

Dibutylbis(Dodecylthio)Stannane:
Stable in normal conditions of use and storage.

10.3 Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Xylene (mixture of Isomers):
Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

Phosphoryl Trichloride And 2-Methyloxirane:
Stable in normal conditions of use and storage.

Isobutyl Acetate:
Risk of explosion on contact with: strong oxidising agents. May react violently with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

N-Butyl Acetate:
Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

Phosphoric Acid:
Risk of explosion on contact with: nitromethane. May react dangerously with: alkalis, sodium borohydride.

10.4 Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

Isobutyl Acetate:
Avoid exposure to: sources of heat, naked flames.

N-Butyl Acetate:
Avoid exposure to: moisture, sources of heat, naked flames.

Dibutylbis(Dodecylthio)Stannane:
Avoid exposure to: UV rays.

10.5 Materials to avoid

Isobutyl Acetate:
Incompatible with: strong oxidants, nitrates, strong acids, strong bases.

N-Butyl Acetate:
Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

Phosphoric Acid:
Incompatible with: metals, strong alkalis, aldehydes, organic sulphides, peroxides.

Dibutylbis(Dodecylthio)Stannane:
Incompatible with: oxidising agents.

10.6 Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

Phosphoric Acid:
May develop: phosphoryl oxides.

Dibutylbis(Dodecylthio)Stannane:
In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in Section 3, to evaluate the toxicological effects of exposure to the product.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information:
Information not available.

Information on likely routes of exposure:
Xylene (mixture of Isomers):
Workers: inhalation; contact with the skin.
Population: ingestion of contaminated food or water; inhalation of ambient air.

N-Butyl Acetate:
Workers: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:
Xylene (mixture of Isomers):
Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

N-Butyl Acetate:
In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

Interactive effects:
Xylene (Mixture Of Isomers):
Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers.
Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

N-Butyl Acetate:
A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

Acute toxicity:

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Aromatic Polyisocyanic Prepolymer:

LD50 (Oral):	> 2000 mg/kg Ratto
LC50 (Inhalation mists/powders):	> 3,82 mg/l/4h

Xylene (mixture of Isomers):

LD50 (Dermal):	4350 mg/kg Rabbit
STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	3523 mg/kg Rat
LC50 (Inhalation vapours):	26 mg/l/4h Rat
STA (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:

LD50 (Dermal):	> 2000 mg/kg OECD 402 (IRI 1989b)
LD50 (Oral):	632 mg/kg bw OECD 401 (Stropp, Bayer AG, 1996)
LC50 (Inhalation mists/powders):	> 7 mg/l/4h OECD 403 (IRI 1990a)

N-Butyl Acetate:

LD50 (Dermal):	> 5000 mg/kg Rabbit
LD50 (Oral):	> 6400 mg/kg Rat
LC50 (Inhalation vapours):	21,1 mg/l/4h Rat

Phosphoric Acid:

LD50 (Dermal):	2740 mg/kg Rabbit
LD50 (Oral):	1530 mg/kg Rat
LC50 (Inhalation mists/powders):	> 0,85 mg/l/1h Rat

Dibutylbis(Dodecylthio)Stannane:

LD50 (Dermal):	> 1000 mg/kg
LD50 (Oral):	> 2000 mg/kg

M-tolylidene Diisocyanate:

LD50 (Dermal):	> 9400 mg/kg Rabbit
LD50 (Oral):	> 2000 mg/kg Rat
LC50 (Inhalation vapours):	0,15 mg/l/4h Rat

Skin Corrosion/Irritation:
Causes skin irritation.

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
Skin Irritation: Non-irritating.

Serious Eye Damage/Irritation:
Causes serious eye irritation.

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
Eye Irritation: Non-irritating.

Respiratory or Skin Sensitisation:
Sensitising for the skin.

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
Respiratory Irritation: Non-irritating.

Skin Sensitizattion:
Reaction products of Phosphoryl Trichloride And 2-Methyloxirane:
Not sensitizing - OECD 429 (2005).

Germ Cell Mutagenicity:
Does not meet the classification criteria for this hazard class.

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
Non-genotoxic.

Carcinogenicity:
Does not meet the classification criteria for this hazard class.

Xylene (mixture of Isomers):
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC). The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
Not carcinogenic.

Reproductive toxicity:
Does not meet the classification criteria for this hazard class.
Adverse effects on sexual function and fertility.

Reaction products of Phosphoryl Trichloride And 2-Methyloxirane:
LOAEL = 99 mg/kg bw/day (OECD 416).
Adverse effects on development of the offspring.

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:
NOAEL = at least 500 mg/kg bw/day (OECD 414, rabbit).

STOT - single exposure:
Does not meet the classification criteria for this hazard class.

STOT - repeated exposure:
Does not meet the classification criteria for this hazard class.

Aspiration hazard:
Does not meet the classification criteria for this hazard class Viscosity: 15000 mm2/s.

11.2. Information on other hazards
Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

12. ECOLOGICAL INFORMATION

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment

12.1 Toxicity

Dibutylbis(Dodecylthio)Stannane:

EC50 - for Crustacea	0,11 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 1,6 mg/l/72h

Reaction products of Phosphoryl Trichloride and 2-Methyloxirane:

LC50 - for Fish	51 mg/l/96h OECD 203
EC50 - for Crustacea	131 mg/l/48h OECD 201
EC50 - for Algae / Aquatic Plants	82 mg/l/72h OECD 201
Chronic NOEC for Crustacea	32 mg/l OECD 202
Chronic NOEC for Algae / Aquatic Plants	42 mg/l OECD 201

Hydrocarbons, C9, Aromatics:

LC50 - for Fish	9,2 mg/l/96h OECD Guideline 203, Oncorhynchus mykiss
EC50 - for Crustacea	3,2 mg/l/48h OECD Guideline 202, Daphnia magna
EC50 - for Algae / Aquatic Plants	2,6 mg/l/72h OECD Guideline 201, Pseudokirchneriella subcapitata

Reaction products of Hexane-1,6-Diol with 2-(Chloromethyl)Oxirane (1:2):

LC50 - for Fish	30 mg/l/96h OECD Guideline 203, Oncorhynchus mykiss
EC50 - for Crustacea	47 mg/l/48h OECD Guideline 202, Daphnia magna
EC50 - for Algae / Aquatic Plants	23,1 mg/l/72h QSAR, Pseudokirchneriella subcapitata

M-Tolylidene Diisocyanate:

EC50 - for Crustacea	12,5 mg/l/48h
Chronic NOEC for Crustacea	6,25 mg/l

12.2 Persistence and degradability

Reaction products of Hexane-1,6-Diol With 2-(Chloromethyl)Oxirane (1:2):
Solubility in water > 10000 mg/l

Aromatic Polyisocyanic Prepolymer:
NOT rapidly degradable.

Phosphoric Acid:
Solubility in water > 850000 mg/l
Degradability: information not available.

Xylene (mixture of Isomers):
Solubility in water 100 - 1000 mg/l
Rapidly degradable.

N-Butyl Acetate:
Solubility in water 1000 - 10000 mg/l

Isobutyl Acetate:
Solubility in water 1000 - 10000 mg/l
Rapidly degradable.

12.3 Bioaccumulative potential

Reaction products of Hexane-1,6-Diol with 2-(Chloromethyl)Oxirane (1:2):
Partition coefficient: n-octanol/water 0,822 Log Kow OECD Guideline 107

Xylene (mixture of Isomers):
Partition coefficient: n-octanol/water 3,12
BCF 25,9

N-Butyl Acetate:
Partition coefficient: n-octanol/water 2,3
BCF 15,3

Isobutyl Acetate:
Partition coefficient: n-octanol/water 2,3
BCF 15,3

12.4 Mobility in soil

Xylene (mixture of Isomers):
Partition coefficient: soil/water 2,73
N-BUTYL ACETATE
Partition coefficient: soil/water < 3

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Information not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
Contaminated packaging:
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. TRANSPORT INFORMATION

This product is not classified as hazardous for transport according to current regulations.

Labels required:

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No **	1263	1263	1263
14.2 Description of the goods	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
14.3 Transport hazard class(es)	3	3	3
14.4 Packaging group	III	III	III
Labels	 3	 3	 3

**The product, if packaged in packages of less than 450 litres, is not subject to ADR regulations as stated in 2.2.3.1.5. The product, if packaged in packages of less than 450 litres, is not subject to obligations relating to marking, labelling and package testing in accordance with 2.3.2.5 of the IMDG CODE.

14.5 Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6 Special precautions for user

ADR / RID:	HIN - Kemler: 30 Special provision: 163, 367, 650	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Passengers:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A72, A192	

14.7 Maritime transport in bulk according to IMO instruments

Information not relevant.

15. REGULATORY INFORMATION

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

Seveso Category - Directive 2012/18/EU:
P5c.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006:
Product:
Point 3 - 40

Contained substance:
Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors:
Not applicable.

Substances in Candidate List (Art. 59 REACH):
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH):
None.

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None.

Substances subject to the Rotterdam Convention:
None.

Substances subject to the Stockholm Convention:
None.

Healthcare controls:
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC):
One - pack performance coatings.

15.2 Chemical safety assessment:

A chemical safety assessment has not been performed for the preparation/for the substances indicated in Section 3.

16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Carc. 2	Carcinogenicity, category 2
Repr. 1B	Reproductive toxicity, category 1B
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4

STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour
H290	May be corrosive to metals
H351	Suspected of causing cancer
H360FD	May damage fertility. May damage the unborn child.
H330	Fatal if inhaled
H302	Harmful if swallowed
H312	Harmful in contact with skin
H332	Harmful if inhaled
H372	Causes damage to organs through prolonged or repeated exposure
H304	May be fatal if swallowed and enters airways
H373	May cause damage to organs through prolonged or repeated exposure
H314	Causes severe skin burns and eye damage
H319	Causes serious eye irritation
H315	Causes skin irritation
H335	May cause respiratory irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H336	May cause drowsiness or dizziness
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
EUH066	Repeated exposure may cause skin dryness or cracking
EUH204	Contains isocyanates. May produce an allergic reaction
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Legend:
ADR: European Agreement concerning the carriage of Dangerous goods by Road
ATE: Acute Toxicity Estimate
CAS: Chemical Abstract Service Number
CE50: Effective concentration (required to induce a 50% effect)
CE: Identifier in ESIS (European archive of existing substances)
CLP: Regulation (EC) 1272/2008
DNEL: Derived No Effect Level
EmS: Emergency Schedule
GHS: Globally Harmonized System of classification and labeling of chemicals
IATA DGR: International Air Transport Association Dangerous Goods Regulation
IC50: Immobilization Concentration 50%
IMDG: International Maritime Code for dangerous goods
IMO: International Maritime Organization
INDEX: Identifier in Annex VI of CLP
LC50: Lethal Concentration 50%
LD50: Lethal dose 50%
OEL: Occupational Exposure Level
PBT: Persistent bioaccumulative and toxic as REACH Regulation
PEC: Predicted environmental Concentration
PEL: Predicted exposure level
PNEC: Predicted no effect concentration
REACH: Regulation (EC) 1907/2006
RID: Regulation concerning the international transport of dangerous goods by train
TLV: Threshold Limit Value
TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
TWA: Time-weighted average exposure limit
TWA STEL: Short-term exposure limit
VOC: Volatile organic Compounds

vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
WGK: Water hazard classes (German).

General Bibliography:
Regulation (EC) 1907/2006 (REACH) of the European Parliament
Regulation (EC) 1272/2008 (CLP) of the European Parliament
Regulation (EU) 2020/878 (II Annex of REACH Regulation)
Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
Regulation (EU) 2016/1179 (IX Atp. CLP)
Regulation (EU) 2017/776 (X Atp. CLP)
Regulation (EU) 2018/669 (XI Atp. CLP)
Regulation (EU) 2019/521 (XII Atp. CLP)
Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
Regulation (EU) 2019/1148
Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
Delegated Regulation (UE) 2023/707

Sectors of use:
Relevant identified uses of the mixture:
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites.
SU19 Building and construction work
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen).

Uses advised against:
SU21 Consumer uses: Private households / general public / consumers.

Training:
This material should only be used by trained personnel.
All the information supplied on this data sheet applies only when the product is used for the prescribed application and in accordance with the directions for use.

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

SDS version summary:

Version	Date of Update	Section Updated
1.1	23/01/2024	Template Change
1.2	18/07/2024	Reviewed in line with manufacturer SDS

Other information:
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.
Please make this data available to all persons involved with the production, transportation and use of this product.

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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