

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

1.1 Product identifier

Trade name/designation: Caltech Clear Glaze - Activator

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

Relevant identified uses: Paint.

Recommended restrictions: Reserved for industrial and professional use.

1.3 Manufacturer/Supplier

Supplier:
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 numbers Alumasc 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

Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:

Acute Tox. 4, H332
Skin Sens. 1B, H317
STOT SE 3, H335
The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictures:



Signal word:

Warning

Hazard statements:

H332 - Harmful if inhaled.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.

Precautionary statements prevention:

P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves and eye protection:
- butyl rubber gloves and Safety glasses with side shields.

Precautionary statements response

P302 - IF ON SKIN:
P352 - Wash with plenty of soap and water.
P333 - If skin irritation or rash occurs:
P313 - Get medical attention.
P304 - IF INHALED:
P340 - Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Precautionary statements storage

P405 - Store locked up.

Precautionary statements disposal

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

Hazardous ingredients

hexamethylene-1,6-diiisocyanate homopolymer and hexamethylene-di-isocyanate

Supplemental label elements

Contains isocyanates. May produce an allergic reaction.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings:

Not applicable.

Tactile warning of danger:

Not applicable

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification:

None known

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2

3.2 Mixtures

Mixture

Ingredient	Numbers	Concentration	Classification (EC) 1272/2008	Specific Conc. Limits, M-factors and ATEs	Type
hexamethylene-1,6-diiisocyanate homopolymer	REACH #: 01-2119485796-17 EC: 931-274-8 CAS: 28182-81-2	≥90	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	-	[1] [2]
hexamethylene-diisocyanate	REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	≤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 the H 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, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 - [2] Substance with a workplace exposure limit
 - [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 - [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
 - [5] Substance of equivalent concern
- Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

4.1 Description of 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.

Skin contact:

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Inhalation:

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

Ingestion:

If swallowed, seek medical advice immediately and show the 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. 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. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture 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 mixtures, this mixture 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 hexamethylene-1,6-diiisocyanate homopolymer, hexamethylene-di-isocyanate. May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact	No specific data.
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.

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

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments No specific treatment.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Recommended: alcohol-resistant foam, CO₂, powders, water spray or mist.

Extinguishing media which must not be used for safety reasons:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products

No specific data.

5.3 Advice for fire-fighters

Special protective actions for fire-fighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel:

No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental Precautions

Avoid dispersal of spilled 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).

6.3 Methods and material for containment and cleaning up

Small spill:

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill:

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information

7. HANDLING AND STORAGE

Persons with a history of asthma, allergies or chronic or recurrent 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 mixture.

7.1 Precautions for safe handling

Care should be taken when re-opening partly-used containers. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed 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, 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.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage

7.3 Specific end use(s)

Recommendations : Not available.
Industrial sector specific solutions : Not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits / Biological exposure indices

Product/ingredient name	Exposure limit values
hexamethylene-1,6-diiisocyanate homopolymer	EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitiser. STEL: 0,07 mg/m ³ , (as -NCO) 15 minutes. TWA: 0,02 mg/m ³ , (as -NCO) 8 hours.
hexamethylene-di-isocyanate	EH40/2005 WELs (United Kingdom (UK), 12/2011). Inhalation sensitiser. STEL: 0,07 mg/m ³ , (as NCO) 15 minutes. TWA: 0,02 mg/m ³ , (as NCO) 8 hours.

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 monitoring standards, such as the following: European Standard EN

689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.


DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
hexamethylene-1,6- ddiisocyanate homopolymer	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m ³	Workers	Local
hexamethylene-di-isocyanate	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m ³	Workers	Local

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
hexamethylene-1,6- ddiisocyanate homopolymer	Fresh water	0,127 mg/l	-
	Marine	0,0127 mg/l	-
	Fresh water sediment	266700 mg/kg dwt	-
	Marine water sediment	26670 mg/kg dwt	-
	Soil	53182 mg/kg dwt	-
	Sewage Treatment Plant	38,28 mg/l	-
hexamethylene-di-isocyanate	Fresh water	0,127 mg/l	-
	Marine	0,0127 mg/kg	-
	Sediment	266700 mg/kg dwt	-
	Soil	53182 mg/kg dwt	-
	Sewage Treatment Plant	38,28 mg/l	-

8.2 Exposure controls

8.2.1. 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 Occupational exposure controls.).
8.2.2. 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 and face protection:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Recommended: safety glasses with side-shields. (EN 166).
Skin protection:	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.

Hands protection:	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. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
Gloves	For prolonged or repeated handling, use the following type of gloves: Recommended: > 8 hours (breakthrough time); butyl rubber (0.6 mm) gloves 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 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.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467).
Other skin protection	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	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: organic vapour (Type A) and particulate filter (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.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Physical state:	Liquid	Colour:	Clear.
Form	Liquid	Relative density [g/cm³]	1,16
Odour:	Mild	Temperature [°C]	
Odour threshold:	Not available	Partition coefficient n-octanol/water:	Not applicable.
pH	Not applicable.	Auto-ignition temperature (°C):	Not applicable.
Melting point/freezing point (°C):	Not available.	Decomposition temperature:	Not available.
Flash point (°C):	Closed cup: 158°C	Viscosity (cSt):	Not available.
Evaporation rate [kg/(s m²):]	Not available.	Explosive properties:	Not available.
Explosion limits [Vol-%]	Not available.	Vapour density (Air = 1):	Not available.
Flammability (solid, gas)	Not available.	Solubility in water [g/l]:	Not available.
Lower Explosive Limit (%):	Not available.	Oxidising properties:	Not available.
Upper Explosive Limit (%):	Not available.	Vapour pressure:	Not available.

9.2 Other information

No additional information.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid

In a fire, hazardous decomposition products may be produced.

10.5 Incompatible materials

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

10.6 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.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
hexamethylene- 1,6-diiisocyanate homopolymer	LC50 Inhalation Dusts and mists	Rat - Female	390 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
hexamethylene-diiisocyanate	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	-

Conclusion/Summary: Harmful if inhaled.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
hexamethylene-1,6-diiisocyanate homopolymer	Skin - Oedema	Rabbit	1	4 hours	-
	Eyes - Cornea opacity	Rabbit	1	-	-
hexamethylene-di- isocyanate	Skin - Erythema/Eschar	Rabbit	3	-	-
	Eyes - Redness of the conjunctivae	Rabbit	3	-	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.
Eyes : Based on available data, the classification criteria are not met.
Respiratory : May cause respiratory irritation.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
hexamethylene- 1,6- ddiisocyanate homopolymer	skin	Guinea pig	Sensitising
hexamethylene-di- isocyanate	Respiratory	Guinea pig	Not sensitizing
	skin	Mouse	Sensitising
	skin	Guinea pig	Sensitising
	Respiratory	Guinea pig	Sensitising

Conclusion/Summary

Skin : May cause an allergic skin reaction.
Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
hexamethylene- 1,6- ddiisocyanate homopolymer	OECD 471	Subject: Bacteria	Negative
	OECD 476	Subject: Mammalian-Animal	Negative
hexamethylene-di- isocyanate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
hexamethylene-1,6- ddiisocyanate homopolymer	Category 3	Not applicable.	Respiratory tract irritation
hexamethylene-di-isocyanate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not Available

Aspiration hazard

Not Available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
hexamethylene- 1,6-diisocyanate homopolymer	Chronic NOAEL Inhalation Dusts and mists	Rat	3,3 mg/m ³	6 hours; 5 days per week Intermittent
	Sub-acute LCLo Inhalation Dusts and mists	Rat	4,3 mg/m ³	6 hours; 5 days per week Intermittent
	Sub-chronic LC50 Inhalation Dusts and mists	Rat	14,7 mg/m ³	6 hours; 5 days per week Intermittent
	Sub-acute LC50 Inhalation Dusts and mists	Rat	89,9 mg/m ³	6 hours; 5 days per week Intermittent
hexamethylene-di-isocyanate	Chronic LCLo Inhalation Vapour	Rat	0,025 p.p.m.	30 days; 6 hours per day Intermittent

Conclusion/Summary:

Based on available data, the classification criteria are not met.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

There are no data available on the mixture 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 not classified as hazardous to the environment.

Product/ingredient name	Result	Species	Exposure
hexamethylene- 1,6-diisocyanate homopolymer	Acute EC50 >10000 mg/l	Bacteria	3 hours
	Acute EC50 >100 mg/l	Daphnia spec.	48 hours
	Acute IC50 >1000 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute LC50 >100 mg/l	Fish	96 hours
hexamethylene-di-isocyanate	Acute EC50 >77,4 mg/l	Algae	72 hours
	Acute EC50 842 mg/l	Bacteria	3 hours

Conclusion/Summary:

Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
hexamethylene-1,6-diiisocyanate homopolymer	OECD 301C	2 % - Not readily - 28 days	-	-
hexamethylene-di- isocyanate	OECD 301F EU 301F Ready Biodegradability - Manometric Respirometry Test	42 % - 10 days 42 % - 28 days	- -	- -

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
hexamethylene-1,6-diiisocyanate homopolymer	Fresh water 0,32 days, 23°C	50%; 0.49 day(s)	Not readily
hexamethylene-di- isocyanate	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
hexamethylene-1,6-diiisocyanate homopolymer	8,38	706	High
hexamethylene-di- isocyanate	0,02	57,63	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.
Mobility: Not available

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / 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 non-recyclable 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
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. 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.

European waste catalogue (EWC) The European Waste Catalogue classification of this product, when disposed of as waste, is:	
Waste Code:	08 01 11* waste paint and varnish containing organic solvents or other hazardous substances
Packaging / 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.
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. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
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 spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Labels required:

	Land transport ADR/RID	ADN	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 Description of the goods	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packaging group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional Information	-	-	-	-

14.6 Special precautions for user

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

14.7. Transport in bulk according to IMO instruments

Not Applicable

15. REGULATORY INFORMATION

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

VOC: The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture: 2004/42/EC - IIA/j; 500g/l (2010). <= 80g/l VOC.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.

References

EH40/2005 Workplace exposure limits Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2016/918

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

CN code : 3210 00 90

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined
Japan inventory (ISHL): Not determined
- Malaysia** : Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are listed or exempted.
- Thailand** :
- Viet Nam** :

15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

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

Classification	Justification
Acute Tox. 4, H332 Skin Sens. 1B, H317 STOT SE 3, H335	On basis of test data Calculation method Calculation method

Full text Risk and Hazard codes

- 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.

Full text of classifications: [CLP/GHS]

Acute Tox. 1, H330 ACUTE TOXICITY (inhalation) - Category 1

Our company policy is one of continuous research and development; we therefore reserve the right to amend content herein without prior notice.

Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Resp. Sens. 1, H334 RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317 SKIN SENSITISATION - Category 1
Skin Sens. 1B, H317 SKIN SENSITISATION - Category 1B
STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

Abbreviations and acronyms

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Wording of the hazard classes

Flam. Liq.: Flammable liquid
STOT SE: Specific target organ toxicity - single exposure
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitization
Aquatic Chronic: Hazardous to the aquatic environment
Eye Irrit.: Serious eye irritation
Acute Tox.: Acute toxicity
STOT RE: Specific target organ toxicity - repeated exposure
Skin Corr.: Skin corrosion
Eye Dam.: Serious eye damage
Resp. Sens.: Respiratory sensitization

SDS Version Summary

Version	Date of Update	Section Updated
1.1	21/08/2023	Template Change

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.

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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