

SAFETY DATA SHEET



8-811 Fast Performance Hardener Slow

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : 8-811 Fast Performance Hardener Slow
Product description : Not available.
Product type : Liquid.

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

Identified uses

Use in coatings - Hardener.

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

Valspar b.v.
Zuiveringweg 89
8243 PE Lelystad
The Netherlands
tel: +31 (0)320 292200

e-mail address of person responsible for this SDS : msds@valspar.com

National contact

Sherwin-Williams UK Limited
Avenue One Station Lane, Witney, United Kingdom
Oxfordshire OX28 4XR

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : UK: 0-800-014-8126
CALL: +(44)-870-8200418 (Hours of operation - 24 hours)

Supplier

Telephone number : Call: +31 (0)320 292200 (8:30AM - 5PM)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Flam. Liq. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
Skin Sens. 1, H317
STOT SE 3, H335
Asp. Tox. 1, H304
Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 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

SECTION 2: Hazards identification

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Harmful if inhaled.
 May cause respiratory irritation.
 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Avoid breathing vapour. Wash thoroughly after handling.

Response

: IF INHALED: Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

Storage

: Store in a well-ventilated place. Keep container tightly closed.

Disposal

: 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.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

8-811 Fast Performance Hardener Slow

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
Hexamethylene diisocyanate, oligomers	EC: 500-060-2 CAS: 28182-81-2	≥50 - ≤75	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
heptan-2-one	REACH #: 01-2119902391-49 EC: 203-767-1 CAS: 110-43-0 Index: 606-024-00-3	≥10 - ≤21	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H332	[1] [2]
Solvent naphtha (petroleum), heavy arom.	REACH #: 01-2119463583-34 EC: 265-198-5 CAS: 64742-94-5	≤9.7	Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	REACH #: 01-2119488734-24 EC: 500-125-5 CAS: 53880-05-0	≤10	Skin Sens. 1B, H317 STOT SE 3, H335	[1] [2]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≤5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6	≤4.9	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1]
2-butoxyethyl acetate	REACH #: 01-2119475112-47 EC: 203-933-3 CAS: 112-07-2 Index: 607-038-00-2	≤5	Acute Tox. 4, H312 Acute Tox. 4, H332	[1] [2]
trimethylbenzene	EC: 247-099-9 CAS: 25551-13-7	≤2.4	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
dioctyltin dilaurate	REACH #: 01-2119979527-19 EC: 222-883-3 CAS: 3648-18-8 Index: 050-031-00-9	<0.3	Repr. 1B, H360D STOT RE 1, H372 (immune system)	[1] [2]
naphthalene	EC: 202-049-5 CAS: 91-20-3 Index: 601-052-00-2	<0.1	Acute Tox. 4, H302 Carc. 2, H351 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) See Section 16 for the full text of the H statements declared above.	[1] [2]

SECTION 3: Composition/information on ingredients

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

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- 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 delayedOver-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

5.3 Advice for firefighters

- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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 British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

SECTION 6: Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.
- 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.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Hexamethylene diisocyanate, oligomers	EH40/2005 WELs (United Kingdom (UK), 1/2020) [isocyanates, all, except methyl isocyanate] Inhalation sensitiser. STEL 15 minutes: 0.07 mg/m ³ (as -NCO). TWA 8 hours: 0.02 mg/m ³ (as -NCO).
heptan-2-one	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 475 mg/m ³ . STEL 15 minutes: 100 ppm. TWA 8 hours: 237 mg/m ³ . TWA 8 hours: 50 ppm.
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	EH40/2005 WELs (United Kingdom (UK), 1/2020) [isocyanates, all, except methyl isocyanate] Inhalation sensitiser. STEL 15 minutes: 0.07 mg/m ³ (as -NCO). TWA 8 hours: 0.02 mg/m ³ (as -NCO).
n-butyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 966 mg/m ³ . STEL 15 minutes: 200 ppm. TWA 8 hours: 724 mg/m ³ . TWA 8 hours: 150 ppm.
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-, p- or mixed isomers] Absorbed through skin. STEL 15 minutes: 441 mg/m ³ . TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m ³ . STEL 15 minutes: 100 ppm.
2-butoxyethyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. TWA 8 hours: 20 ppm. STEL 15 minutes: 50 ppm. STEL 15 minutes: 332 mg/m ³ . TWA 8 hours: 133 mg/m ³ .
trimethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [trimethylbenzenes, all isomers or mixtures] TWA 8 hours: 25 ppm. TWA 8 hours: 125 mg/m ³ .
dioctyltin dilaurate	EH40/2005 WELs (United Kingdom (UK), 1/2020) [tin compounds, organic, except cyhexatin (ISO)] Absorbed through skin. STEL 15 minutes: 0.2 mg/m ³ (as Sn). TWA 8 hours: 0.1 mg/m ³ (as Sn).
naphthalene	EU OEL (Europe, 1/2022) TWA 8 hours: 10 ppm. TWA 8 hours: 50 mg/m ³ .

Biological exposure indices

Product/ingredient name	Exposure indices
xylene	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers] BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.
naphthalene	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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 diisocyanate, oligomers	DNEL	Long term Inhalation	0.5 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	0.5 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
heptan-2-one	DNEL	Long term Oral	23.32 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	23.32 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	54.27 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	84.31 mg/m ³	General population	Systemic
Solvent naphtha (petroleum), heavy arom.	DNEL	Long term Inhalation	394.25 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	1516 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	32 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.03 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.28 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.69 mg/m ³	General population	Local
	DNEL	Long term Inhalation	0.69 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.95 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.31 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	2.31 mg/m ³	Workers	Systemic
	DNEL	Short term Oral	25.6 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	143.5 mg/m ³	General population	Local
DNEL	Short term Inhalation	160.23 mg/m ³	Workers	Local	
DNEL	Short term Inhalation	226 mg/m ³	General population	Systemic	

SECTION 8: Exposure controls/personal protection

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	DNEL	Short term Inhalation	384 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	0.3 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	0.6 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	0.29 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	0.58 mg/m ³	Workers	Local	
	n-butyl acetate	DNEL	Long term Inhalation	35.7 mg/m ³	General population [Consumers]	Local
		DNEL	Short term Inhalation	300 mg/m ³	General population [Consumers]	Local
		DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
		DNEL	Long term Oral	2 mg/kg bw/day	General population [Consumers]	Systemic
		DNEL	Short term Oral	2 mg/kg bw/day	General population [Consumers]	Systemic
		DNEL	Long term Inhalation	300 mg/m ³	Workers	Systemic
		DNEL	Short term Inhalation	600 mg/m ³	Workers	Systemic
		DNEL	Long term Inhalation	300 mg/m ³	Workers	Local
		DNEL	Short term Inhalation	600 mg/m ³	Workers	Local
		DNEL	Long term Dermal	11 mg/kg bw/day	Workers	Systemic
		DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Oral	2 mg/kg bw/day	General population	Systemic
		DNEL	Short term Oral	2 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	Systemic
		DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
		DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Inhalation	12 mg/m ³	General population	Systemic
		DNEL	Long term Inhalation	35.7 mg/m ³	General population	Local
		DNEL	Long term Inhalation	48 mg/m ³	Workers	Systemic
		DNEL	Short term Inhalation	300 mg/m ³	General population	Local
		DNEL	Short term Inhalation	300 mg/m ³	General population	Systemic
		DNEL	Long term Inhalation	300 mg/m ³	Workers	Local
		DNEL	Short term Inhalation	600 mg/m ³	Workers	Local
		DNEL	Short term	600 mg/m ³	Workers	Systemic

SECTION 8: Exposure controls/personal protection

xylene	DNEL	Inhalation Short term Inhalation	174 mg/m ³	General population [Consumers]	Local	
	DNEL	Short term Inhalation	174 mg/m ³	General population [Consumers]	Systemic	
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic	
	Solvent naphtha (petroleum), light arom.	DNEL	Long term Dermal	11 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	32 mg/m ³	General population	Systemic
		DNEL	Long term Oral	11 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
DNEL		Long term Inhalation	150 mg/m ³	Workers	Systemic	
DNEL		Long term Inhalation	0.41 mg/m ³	General population	Systemic	
DNEL		Long term Inhalation	1.9 mg/m ³	Workers	Systemic	
DNEL		Long term Inhalation	178.57 mg/ m ³	General population	Local	
DNEL		Short term Inhalation	640 mg/m ³	General population	Local	
DNEL		Long term Inhalation	837.5 mg/ m ³	Workers	Local	
DNEL		Short term Inhalation	1066.67 mg/m ³	Workers	Local	
DNEL		Short term Inhalation	1152 mg/ m ³	General population	Systemic	
DNEL		Short term Inhalation	1286.4 mg/ m ³	Workers	Systemic	
2-butoxyethyl acetate		DNEL	Short term Inhalation	499 mg/m ³	General population	Systemic
		DNEL	Short term Inhalation	775 mg/m ³	Workers	Systemic
		DNEL	Long term Inhalation	80 mg/m ³	General population	Systemic
		DNEL	Long term Inhalation	133 mg/m ³	Workers	Systemic
	DNEL	Short term	200 mg/m ³	General	Local	

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SECTION 8: Exposure controls/personal protection

dioctyltin dilaurate	DNEL	Inhalation Long term Oral	8.6 mg/kg bw/day	population General population	Systemic
	DNEL	Short term Oral	36 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	72 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	120 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	169 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	333 mg/m ³	Workers	Local
naphthalene	DNEL	Long term Oral	0.0005 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.0009 mg/ m ³	General population	Systemic
	DNEL	Long term Inhalation	0.0035 mg/ m ³	Workers	Systemic
	DNEL	Long term Dermal	3.57 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	25 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	25 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Hexamethylene diisocyanate, oligomers	Fresh water	0.127 mg/l	-
	Marine water	0.0127 mg/l	-
	Fresh water sediment	266700 mg/kg dwt	-
	Marine water sediment	26670 mg/kg dwt	-
	Sewage Treatment Plant	38.28 mg/l	-
	Soil	53182 mg/kg dwt	-
heptan-2-one	Fresh water	0.0982 mg/l	-
	Marine water	0.00982 mg/l	-
	Sewage Treatment Plant	12.5 mg/l	-
	Fresh water sediment	1.89 mg/kg dwt	-
n-butyl acetate	Marine water sediment	0.189 mg/kg dwt	-
	Soil	0.321 mg/kg dwt	-
	Fresh water	0.18 mg/l	-
	Marine	0.018 mg/l	-
	Sewage Treatment Plant	35.6 mg/l	-
	Fresh water sediment	0.981 mg/kg dwt	-
xylene	Marine water sediment	0.0981 mg/kg dwt	-
	Soil	0.0903 mg/kg dwt	-
	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
2-butoxyethyl acetate	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg dwt	-
	Fresh water	0.304 mg/l	-
	Marine water	0.0304 mg/l	-
	Sewage Treatment Plant	90 mg/l	-
	Fresh water sediment	2.03 mg/kg dwt	-

SECTION 8: Exposure controls/personal protection

dioctyltin dilaurate	Marine water sediment	0.203 mg/kg dwt	-
	Soil	0.415 mg/kg dwt	-
	Secondary Poisoning	60 mg/kg	-
	Fresh water	0.002 µg/l	-
	Marine water	0.0002 µg/l	-
	Sewage Treatment Plant	100 mg/l	-
naphthalene	Fresh water sediment	0.028 mg/kg dwt	-
	Marine water sediment	0.0028 mg/kg dwt	-
	Soil	0.006 mg/kg dwt	-
	Secondary Poisoning	0.02 mg/kg	-
	Fresh water	2.4 µg/l	-
	Marine water	2.4 µg/l	-
	Sewage Treatment Plant	2.9 mg/l	-
	Fresh water sediment	67.2 µg/kg dwt	-
Marine water sediment	67.2 µg/kg dwt	-	
Soil	53.3 µg/kg dwt	-	

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

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 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: chemical splash goggles. Recommended: If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Recommended EN 374 butyl rubber polyvinyl alcohol (PVA) ≥ 0.7 mm
< 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR (≥ 0.35 mm). Only suitable as splash protection. Only suitable for brief exposure. In the event of contamination, change protective gloves immediately.

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to British Standard BS EN 1149 for further information on material and design requirements and test methods. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.

SECTION 8: Exposure controls/personal protection

- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: full-face mask supplied-air respirator
- 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.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Pungent. Aromatic.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : >100°C (>212°F)
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Lower: 0.8%
Upper: 7.6%
- Flash point** : Closed cup: 27°C (80.6°F)
- Auto-ignition temperature** : 415°C (779°F)
- Decomposition temperature** : Not applicable.
- pH** : Not applicable.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): 4 mm²/s
- Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

- Solubility in water** : Not applicable.
- Miscible with water** : No.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Vapour pressure** : 1.3 kPa (10 mm Hg)
- Evaporation rate** : 0.8 (butyl acetate = 1)
- Relative density** : 1.012
- Density** : 1.012 g/cm³
- Vapour density** : 3.9 [Air = 1]
- Explosive properties** : Not available.
- Oxidising properties** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

SECTION 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** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Hexamethylene diisocyanate, oligomers	LC50 Inhalation Dusts and mists	Rat	18500 mg/m ³	1 hours
	LC50 Inhalation Dusts and mists	Rat	2.18 mg/l	4 hours
	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
heptan-2-one	LC50 Inhalation Vapour	Rat	16.8 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1600 mg/kg	-
Solvent naphtha (petroleum), heavy arom.	LC50 Inhalation Dusts and mists	Rat	>4688 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	>14000 mg/kg	-
n-butyl acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat - Male	29000 mg/l	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapour	Rat	6193 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	3592 mg/kg	-
2-butoxyethyl acetate	LD50 Dermal	Rabbit	1500 mg/kg	-
	LD50 Oral	Rat	1880 mg/kg	-
trimethylbenzene	LD50 Oral	Rat	8970 mg/kg	-
	LD50 Oral	Rat	6450 mg/kg	-
dioctyltin dilaurate	LD50 Oral	Rat	6450 mg/kg	-
	LD50 Dermal	Rabbit	>20 g/kg	-
naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-

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SECTION 11: Toxicological information

	LD50 Dermal	Rat	>2500 mg/kg	-
	LD50 Oral	Rat	490 mg/kg	-

Conclusion/Summary : Not available.**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
8-811 Fast Performance Hardener Slow	12504.9	14531.7	106779.9	17.0	N/A
Hexamethylene diisocyanate, oligomers	N/A	N/A	N/A	11	N/A
heptan-2-one	1600	N/A	N/A	16.8	N/A
n-butyl acetate	10760	N/A	N/A	N/A	N/A
xylene	4300	1100	5000	29000	N/A
Solvent naphtha (petroleum), light arom.	3592	N/A	N/A	N/A	N/A
2-butoxyethyl acetate	N/A	1500	N/A	11	N/A
trimethylbenzene	8970	N/A	N/A	11	N/A
dioctyltin dilaurate	6450	N/A	N/A	N/A	N/A
naphthalene	490	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene diisocyanate, oligomers	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
heptan-2-one	Skin - Mild irritant	Rabbit	-	24 hours 14 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 uL	-
Solvent naphtha (petroleum), heavy arom.	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 mg	-
n-butyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	87 mg	-
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rabbit	-	8 hours 60 uL	-
Solvent naphtha (petroleum), light arom.	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-
2-butoxyethyl acetate	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
trimethylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
naphthalene	Skin - Mild irritant	Rabbit	-	495 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 0.05 MI	-

Conclusion/Summary : Not available.**Respiratory or skin sensitization**

Product/ingredient name	Route of exposure	Species	Result
Hexamethylene diisocyanate, oligomers	skin	Guinea pig	Sensitising
	skin	Mouse	Sensitising

SECTION 11: Toxicological information**Conclusion/Summary** : Not available.**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
Hexamethylene diisocyanate, oligomers	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/-	Negative

Conclusion/Summary : Not available.**Carcinogenicity**

Not available.

Conclusion/Summary : Not available.**Reproductive toxicity**

Not available.

Conclusion/Summary : Not available.**Teratogenicity**

Not available.

Conclusion/Summary : Not available.**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
Hexamethylene diisocyanate, oligomers	Category 3	-	Respiratory tract irritation
Solvent naphtha (petroleum), heavy arom.	Category 3	-	Narcotic effects
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	Category 3	-	Respiratory tract irritation
n-butyl acetate	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
dioctyltin dilaurate	Category 1	-	immune system

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1
trimethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.**Potential acute health effects****Eye contact** : No known significant effects or critical hazards.**Inhalation** : Harmful if inhaled. May cause respiratory irritation.**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.**Ingestion** : May be fatal if swallowed and enters airways.**Symptoms related to the physical, chemical and toxicological characteristics**

SECTION 11: Toxicological information

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: Adverse symptoms may include the following: nausea or vomiting

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 diisocyanate, oligomers	Sub-chronic NOAEL Inhalation Dusts and mists	Rat - Male, Female	3.3 mg/m ³	90 days; 6 hours per day

Conclusion/Summary : Not available.

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.

Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
Hexamethylene diisocyanate, oligomers	Acute EC50 >1000 mg/l	Algae - <i>Scenedesmus subspicatus</i>	72 hours
	Acute EC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
heptan-2-one	Acute LC50 >100 mg/l	Fish - <i>Danio rerio</i>	96 hours
	Acute LC50 131000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
Solvent naphtha (petroleum), heavy arom.	Acute EC50 11 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 3 to 10 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	Acute LC50 2 to 5 mg/l	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute EC50 >100 mg/l	Daphnia	48 hours
n-butyl acetate	Acute EC50 >100 mg/l	Fish	96 hours
	Acute EC50 397 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours
	Acute EC50 44 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours

SECTION 12: Ecological information

xylene	Acute LC50 32 mg/l Marine water	Crustaceans - Brine shrimp - <i>Artemia salina</i>	48 hours
	Acute LC50 18 mg/l Acute NOEC 200 mg/l Acute EC50 1 to 10 mg/l Acute EC50 1 to 10 mg/l Acute LC50 8500 µg/l Marine water	Fish - <i>Pimephales promelas</i> Algae Algae Daphnia - <i>Daphnia magna</i> Crustaceans - Daggerblade grass shrimp - <i>Palaemonetes pugio</i>	96 hours 72 hours 72 hours 48 hours 48 hours
Solvent naphtha (petroleum), light arom.	Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
	Acute EC50 2.9 mg/l Acute EC50 3.2 mg/l Acute LC50 9.2 mg/l Acute NOEC >1 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i> Daphnia - <i>Daphnia magna</i> Fish - <i>Oncorhynchus mykiss</i> Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours 48 hours 96 hours 72 hours
2-butoxyethyl acetate	Acute EC50 1570 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
trimethylbenzene	Acute EC50 37 mg/l Acute LC50 22 mg/l Acute LC50 5600 µg/l Marine water	Daphnia - <i>Daphnia magna</i> Fish - <i>Pimephales promelas</i> Crustaceans - Daggerblade grass shrimp - <i>Palaemonetes pugio</i>	48 hours 96 hours 48 hours
	naphthalene	Acute EC50 1.6 mg/l Fresh water Acute LC50 2350 µg/l Marine water Acute LC50 213 µg/l Fresh water Chronic NOEC 0.5 mg/l Marine water Chronic NOEC 1.5 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate Crustaceans - Daggerblade grass shrimp - <i>Palaemonetes pugio</i> Fish - Crimson-spotted rainbowfish - <i>Melanotaenia fluviatilis</i> - Larvae Crustaceans - Fiddler crab - <i>Uca pugnax</i> - Adult Fish - Mozambique tilapia - <i>Oreochromis mossambicus</i>

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Hexamethylene diisocyanate, oligomers	EU 67/548/EEC ANNEX V, C.4.E.	1 % - Not readily - 28 days	-	-
heptan-2-one	-	69 % - Readily - 28 days	-	-
Solvent naphtha (petroleum), heavy arom.	-	50 % - Readily - 28 days	-	Fresh water
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	OECD 302C Inherent	5 % - 28 days	-	-
	Biodegradability: Modified MITI Test (II) OECD 301F Ready	1 % - 28 days	-	-
n-butyl acetate	Biodegradability - Manometric Respirometry Test OECD 301D Ready	>80 % - 5 days	-	-
	Biodegradability - Closed Bottle Test			
Solvent naphtha (petroleum),	-	78 % - Readily - 28 days	-	Fresh water

SECTION 12: Ecological information

light arom.				
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Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene diisocyanate, oligomers	Fresh water 7.7 days, 23°C	-	Not readily
heptan-2-one	-	-	Readily
Solvent naphtha (petroleum), heavy arom.	-	-	Readily
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	-	-	Not readily
n-butyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
2-butoxyethyl acetate	-	90.4%; 28 day(s)	-

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	367.7	Low
heptan-2-one	2.26	-	Low
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	99 to 5780	High
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers	14.48	-	High
n-butyl acetate	2.3	-	Low
xylene	3.12	8.1 to 25.9	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
2-butoxyethyl acetate	1.51	-	Low
trimethylbenzene	3.4 to 3.8	-	Low
dioctyltin dilaurate	-	<100	Low
naphthalene	3.4	36.5 to 168	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 : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods**Product**

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 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.

Waste catalogue

Waste code	Waste designation
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.

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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	Paint related material
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 30
Limited quantity 5 L
Special provisions 163, 640E, 650
Tunnel code (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
Special provisions 163, 640E, 650

IMDG : **Emergency schedules** F-E, S-E
Special provisions 163, 223, 955

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.
Special provisions A3, A72

8-811 Fast Performance Hardener Slow

SECTION 14: Transport 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 available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

None of the components are listed above the relevant limit.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

Product/ingredient name	%	Designation [Usage]
8-811 Fast Performance Hardener Slow	≥90	3
dioctyltin dilaurate	<0.3	20
hexamethylene-di-isocyanate	≤0.1	74
3-isocyanatomethyl-	≤0.1	74
3,5,5-trimethylcyclohexyl isocyanate		
toluene	≤0.1	48
benzene	<0.1	5
		72

Labelling : Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

International regulations

SECTION 15: Regulatory information

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

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.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Eurasian Economic Union	: Russian Federation inventory : All components are listed or exempted.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are active or exempted.
Viet Nam	: All components are listed or exempted.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = GB 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
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Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 3, H412	Calculation method

SECTION 16: Other information**Full text of abbreviated H statements**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
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.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 2	CARCINOGENICITY - Category 2
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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