

# SAFETY DATA SHEET

47-65 MS Hardener Slow

## Section 1. Identification

**Product identifier** : 47-65 MS Hardener Slow  
**Product type** : Liquid.

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

#### Identified uses

Use in coatings - Hardener.

#### Uses advised against

Not applicable.

### Supplier's details

**Manufacturer** : Valspar b.v.  
Zuiveringweg 89  
8243 PE Lelystad  
The Netherlands  
tel: +31 (0)320 292200  
fax: +31 (0)320 292201

**Emergency telephone number** : Call: +31 (0)320 292200 (during daytime)

**Supplier** : Valspar Automotive Australia Pty Limited  
4 Hawke Street  
Kincumber NSW 2251  
AUSTRALIA  
T: +612 4368 4054  
E: autoinfo@valspar.com  
www.de-beer.com

**Emergency telephone number** : CHEMTREC +(61) 290372994 (Available 24hrs/7 days a week)  
Poisons Information Centre: Australia 131 126

## Section 2. Hazard(s) identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A  
SKIN SENSITISATION - Category 1  
CARCINOGENICITY - Category 1  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3  
ASPIRATION HAZARD - Category 1

### GHS label elements

#### Hazard pictograms



**Signal word** : DANGER

## Section 2. Hazard(s) identification

**Hazard statements** : Flammable liquid and vapour.  
 May be fatal if swallowed and enters airways.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 May cause respiratory irritation.  
 May cause drowsiness or dizziness.  
 May cause cancer.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapour. Wash thoroughly after handling.

**Response** : IF exposed or concerned: Get medical advice or attention. 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. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**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** : Not applicable.

**Other hazards which do not result in classification** : None known.

## Section 3. Composition and ingredient information

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
Aliphatic polyisocyanate	≥10 - ≤30	28182-81-2
Aliphatic polyisocyanate 2	≥10 - ≤30	53880-05-0
2-methoxy-1-methylethyl acetate	≥10 - ≤30	108-65-6
n-butyl acetate	≤10	123-86-4
xylene	<10	1330-20-7
Solvent naphtha (petroleum), light arom.	≤10	64742-95-6
trimethylbenzene	≤3	25551-13-7
ethylbenzene	≤3	100-41-4
cumene	≤0.3	98-82-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

## Section 4. First aid measures

### Description of necessary 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.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-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  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

### Indication of immediate medical attention and special treatment needed, if necessary

## Section 4. First aid measures

- 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.
- 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.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : 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.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

**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.

**Hazchem code** : •3Y

## Section 6. Accidental release measures

### 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".

**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).

### 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### 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. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapour or mist. 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.

- 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.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Aliphatic polyisocyanate	<b>Safe Work Australia (Australia, 12/2019). [Isocyanates, all] Skin sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as -NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as -NCO) 8 hours.
Aliphatic polyisocyanate 2	<b>Safe Work Australia (Australia, 12/2019). [Isocyanates, all] Skin sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as -NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as -NCO) 8 hours.
2-methoxy-1-methylethyl acetate	<b>Safe Work Australia (Australia, 12/2019).</b>

## Section 8. Exposure controls and personal protection

n-butyl acetate	<p><b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 274 mg/m<sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 548 mg/m<sup>3</sup> 15 minutes.</p> <p><b>Safe Work Australia (Australia, 12/2019).</b> STEL: 950 mg/m<sup>3</sup> 15 minutes. STEL: 200 ppm 15 minutes. TWA: 713 mg/m<sup>3</sup> 8 hours. TWA: 150 ppm 8 hours.</p>
xylene	<p><b>Safe Work Australia (Australia, 12/2019).</b> <b>[Xylene (o-, m-, p- isomers)]</b> STEL: 655 mg/m<sup>3</sup>, 0 times per shift, 15 minutes. STEL: 150 ppm, 0 times per shift, 15 minutes. TWA: 350 mg/m<sup>3</sup>, 0 times per shift, 8 hours. TWA: 80 ppm, 0 times per shift, 8 hours.</p>
trimethylbenzene	<p><b>Safe Work Australia (Australia, 12/2019).</b> <b>[Trimethyl benzene]</b> TWA: 123 mg/m<sup>3</sup> 8 hours. TWA: 25 ppm 8 hours.</p>
ethylbenzene	<p><b>Safe Work Australia (Australia, 12/2019).</b> STEL: 543 mg/m<sup>3</sup> 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m<sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.</p>
cumene	<p><b>Safe Work Australia (Australia, 12/2019).</b> <b>Absorbed through skin.</b> STEL: 375 mg/m<sup>3</sup> 15 minutes. STEL: 75 ppm 15 minutes. TWA: 125 mg/m<sup>3</sup> 8 hours. TWA: 25 ppm 8 hours.</p>

### 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.

### 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.

### 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

## Section 8. Exposure controls and personal 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) Viton®  $\geq 0.7$  mm  
4 - 8 hours (breakthrough time): Recommended EN 374 neoprene  $\geq 0.7$  mm  
< 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR ( $\geq 0.35$  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. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.
- 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

## Section 9. Physical and chemical properties and safety characteristics

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

### Appearance

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Ethereal.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Boiling point, initial boiling point, and boiling range** :  $>100^{\circ}\text{C}$  ( $>212^{\circ}\text{F}$ )
- Flash point** : Closed cup:  $34^{\circ}\text{C}$  ( $93.2^{\circ}\text{F}$ )
- Evaporation rate** : 1 (butyl acetate = 1)
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 0.8%  
Upper: 12.7%
- Vapour pressure** : 1.3 kPa (10 mm Hg)
- Relative vapour density** : 4.7 [Air = 1]
- Relative density** : 1.02
- Density** :  $1.02\text{ g/cm}^3$
- Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

- Solubility in water** : Not applicable.

## Section 9. Physical and chemical properties and safety characteristics

<b>Miscible with water</b>	: No.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: 333°C (631.4°F)
<b>Decomposition temperature</b>	: Not applicable.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): 4 mm <sup>2</sup> /s (4 cSt)
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 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.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidising materials
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Aliphatic polyisocyanate	LC50 Inhalation Dusts and mists	Rat	18500 mg/m <sup>3</sup>	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	-
Aliphatic polyisocyanate 2	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	>14000 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
n-butyl acetate	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
xylene	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
Solvent naphtha (petroleum), light arom.	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 <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>3160 mg/kg	-



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trimethylbenzene	LD50 Oral	Rat	3592 mg/kg	-
	LD50 Oral	Rat	8970 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
cumene	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Vapour	Rat	39000 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	1400 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Aliphatic polyisocyanate	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
n-butyl acetate	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
Solvent naphtha (petroleum), light arom. trimethylbenzene	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-
ethylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
cumene	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	86 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Aliphatic polyisocyanate	skin	Guinea pig	Sensitising
	skin	Mouse	Sensitising

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Aliphatic polyisocyanate	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

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

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### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Aliphatic polyisocyanate	Category 3	-	Respiratory tract irritation
Aliphatic polyisocyanate 2	Category 3	-	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
n-butyl acetate	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
cumene	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 2	-	-
ethylbenzene	Category 2	-	-

### Aspiration hazard

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

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness

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- 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
Aliphatic polyisocyanate	Sub-chronic NOAEL Inhalation Dusts and mists	Rat - Male, Female	3.3 mg/m <sup>3</sup>	90 days; 6 hours per day

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### 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)
47-65 MS Hardener Slow	N/A	14254.7	64794.2	32.6	N/A
Aliphatic polyisocyanate	N/A	N/A	N/A	11	N/A
2-methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	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
trimethylbenzene	8970	N/A	N/A	11	N/A
ethylbenzene	3500	12126	N/A	11	N/A
cumene	N/A	N/A	N/A	39	N/A

## Section 12. Ecological information

### Toxicity

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Aliphatic polyisocyanate	Acute EC50 >1000 mg/l	Algae - Scenedesmus subspicatus	72 hours
Aliphatic polyisocyanate 2	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100 mg/l	Fish - Danio rerio	96 hours
2-methoxy-1-methylethyl acetate	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute EC50 >100 mg/l	Fish	96 hours
n-butyl acetate	Acute EC50 >1000 mg/l	Algae - Pseudokirchnerella subcapitata	96 hours
	Acute EC50 408 mg/l	Daphnia - Daphnia magna	48 hours
xylene	Acute LC50 134 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 397 mg/l	Algae - Selenastrum capricornutum	72 hours
	Acute EC50 44 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 18 mg/l	Fish - Pimephales promelas	96 hours
	Acute NOEC 200 mg/l	Algae	72 hours
Solvent naphtha (petroleum), light arom.	Acute EC50 1 to 10 mg/l	Algae	72 hours
	Acute EC50 1 to 10 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 2.9 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3.2 mg/l	Daphnia - Daphnia magna	48 hours
trimethylbenzene	Acute LC50 9.2 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute NOEC >1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
ethylbenzene	Acute LC50 5600 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute EC50 4900 µg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
cumene	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 7.4 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Aliphatic polyisocyanate	EU 67/548/EEC ANNEX V, C.4.E.	1 % - Not readily - 28 days	-	-
Aliphatic polyisocyanate 2	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	5 % - 28 days	-	-
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	1 % - 28 days	-	-
2-methoxy-1-methylethyl acetate	OECD 302B Inherent Biodegradability:	100 % - 28 days	-	-

## Section 12. Ecological information

n-butyl acetate	Zahn-Wellens/ EMPA Test OECD 301F Ready Biodegradability - Manometric Respirometry Test	83 % - 28 days	-	-
	OECD 301D Ready Biodegradability - Closed Bottle Test	>80 % - 5 days	-	-
Solvent naphtha (petroleum), light arom.	-	78 % - Readily - 28 days	-	Fresh water

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Aliphatic polyisocyanate	Fresh water 7.7 days, 23°C	-	Not readily
Aliphatic polyisocyanate 2	-	-	Not readily
2-methoxy-1-methylethyl acetate	-	-	Readily
n-butyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Aliphatic polyisocyanate	5.54	367.7	low
Aliphatic polyisocyanate 2	14.48	-	high
2-methoxy-1-methylethyl acetate	1.2	-	low
n-butyl acetate	2.3	-	low
xylene	3.12	8.1 to 25.9	low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
trimethylbenzene	3.4 to 3.8	-	low
ethylbenzene	3.6	-	low
cumene	3.55	35.48	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.





## Section 13. Disposal considerations

**Disposal methods** : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

## Section 13. Disposal considerations

dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	ADG	ADR/RID	IMDG	IATA
<b>UN number</b>	UN1263	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	Paint related material
<b>Transport hazard class(es)</b>	3 	3 	3 	3 
<b>Packing group</b>	III	III	III	III
<b>Environmental hazards</b>	No.	No.	No.	No.

### Additional information

<b>ADG</b>	: <b>Hazchem code</b> •3Y <b>Special provisions</b> 163, 223, 367
<b>ADR/RID</b>	: <b>Hazard identification number</b> 30 <b>Limited quantity</b> 5 L <b>Special provisions</b> 163, 640E, 650, 367 <b>Tunnel code</b> (D/E)
<b>IMDG</b>	: <b>Emergency schedules</b> F-E, _S-E_ <b>Special provisions</b> 163, 223, 367, 955
<b>IATA</b>	: <b>Quantity limitation</b> 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. <b>Special provisions</b> A3, A72, A192

**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.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

## Section 15. Regulatory information

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

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

## Section 16. Any other relevant information

### History

**Date of printing** : 12/16/2022

**Date of issue/Date of revision** : 12/16/2022

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**Version** : 1

**Key to abbreviations** : ADG = Australian Dangerous Goods  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
SUSMP = Standard Uniform Schedule of Medicine and Poisons  
UN = United Nations

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
CARCINOGENICITY - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	Calculation method

## Section 16. Any other relevant information

ASPIRATION HAZARD - Category 1

Calculation method

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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