SAFETY DATA SHEET

SP2445 MS Hardener Medium

Section 1. Identification

Product name : SP2445 MS Hardener Medium

Product type : Liquid.

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

Identified uses
Use in coatings - Hardener.

Supplier

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's details : DBNZ Coatings Limited
6 Killarney Lane
Hamilton 3243
NEW ZEALAND
T: +64 7847 0933
F: +64 7847 0932
E: info@dbnz.co.nz

Emergency telephone number (with hours of operation) : New Zealand Poisons Information Centre: 0800 764766 (24 hrs)

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

Section 2. Hazards identification

HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category C
6.1 - ACUTE TOXICITY (oral) - Category E
6.3 - SKIN IRRITATION - Category B
6.4 - EYE IRRITATION - Category A (Irritant)
6.5 - SENSITIZATION - Category A (Respiratory)
6.7 - CARCINOGENICITY - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B
6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B
9.1 - AQUATIC ECOTOXICITY - Category C

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

GHS label elements

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapour.
May be harmful if swallowed.
Causes mild skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye/face protection. Wear appropriate respiratory protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Do not breathe vapour or spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. Get medical advice/ attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol :

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

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
Aliphatic polyisocyanate.	25 - 50	28182-81-2
2-methoxy-1-methylethyl acetate	12.5 - 25	108-65-6
n-butyl acetate	12.5 - 25	123-86-4
xylene	5 - 12.5	1330-20-7
Solvent naphtha (petroleum), light arom.	5 - 12.5	64742-95-6
1,2,4-trimethylbenzene	1 - 5	95-63-6
ethylbenzene	1 - 5	100-41-4
mesitylene	1 - 5	108-67-8
hexamethylene-di-isocyanate	0 - 1	822-06-0

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Inhalation : Get medical attention immediately. 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. 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. In the event of any complaints or symptoms, avoid further exposure.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingestion : May be harmful if swallowed.

Skin contact : Causes mild skin irritation.

Eye contact : Causes serious eye irritation.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Specific treatments : Not available.

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.

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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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 thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Hazchem code : 3Y

Special precautions 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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : 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 (see Section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

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

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. 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 : Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. 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. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

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. Eliminate all ignition sources. Separate from oxidizing 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Aliphatic polyisocyanate.	**NZ HSWA (New Zealand, 6/2016). Skin sensitiser.** WES-TWA: 0.02 mg/m³, (measured as -NCO) 8 hours. WES-STEL: 0.07 mg/m³, (measured as -NCO) 15 minutes.
2-methoxy-1-methylethyl acetate	**EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.** STEL: 548 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 274 mg/m³ 8 hours. STEL: 100 ppm 15 minutes.
n-butyl acetate	**NZ HSWA (New Zealand, 6/2016).** WES-TWA: 150 ppm 8 hours. WES-TWA: 713 mg/m³ 8 hours. WES-STEL: 950 mg/m³ 15 minutes. WES-STEL: 200 ppm 15 minutes.
xylene	**NZ HSWA (New Zealand, 6/2016). Notes: See Notice of Intended Changes.** WES-TWA: 217 mg/m³, 0 times per shift, 8 hours. WES-TWA: 50 ppm, 0 times per shift, 8 hours.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2016).** TWA: 123 mg/m³ 8 hours. TWA: 25 ppm 8 hours.
ethylbenzene	**NZ HSWA (New Zealand, 6/2016).**

Section 8. Exposure controls/personal protection

	WES-STEL: 543 mg/m³ 15 minutes. WES-STEL: 125 ppm 15 minutes. WES-TWA: 434 mg/m³ 8 hours. WES-TWA: 100 ppm 8 hours.
mesitylene	**ACGIH TLV (United States, 3/2016).** TWA: 123 mg/m³ 8 hours. TWA: 25 ppm 8 hours.
hexamethylene-di-isocyanate	**NZ HSWA (New Zealand, 6/2016). Skin sensitiser. Notes: measured as -NCO** WES-STEL: 0.07 mg/m³, (measured as -NCO) 15 minutes. WES-TWA: 0.02 mg/m³, (measured as -NCO) 8 hours.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: full-face mask supplied-air respirator

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® >= 0.7 mm
4 - 8 hours (breakthrough time): Recommended EN 374 neoprene >= 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.

Eye 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 : 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.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Clear.

Odour : Not available.

Odour threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >100°C (>212°F)

Flash point : Closed cup: 32°C (89.6°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapour pressure : Not available.

Vapour density : Not available.

Relative density : 0.98

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : 350°C (662°F)

Decomposition temperature : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Not applicable.

Heat of combustion : Not available.

Ignition distance : Not applicable.

Enclosed space ignition - Time equivalent : Not applicable.

Enclosed space ignition - Deflagration density : Not applicable.

Flame height : Not applicable.

Flame duration : Not applicable.

Section 10. Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

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.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingestion : May be harmful if swallowed.

Skin contact : Causes mild skin irritation.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Aliphatic polyisocyanate.	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	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat - Female	>5000 mg/kg	-
n-butyl acetate	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 Vapour	Rat	27.6 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapour	Rat	>6193 mg/l	4 hours
	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	3492 mg/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	>5000 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	>9.6 mg/l	4 hours
	LD50 Dermal	Rabbit	>15000 mg/kg	-
	LD50 Oral	Rat	>3500 mg/kg	-
hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	Rat	0.124 mg/l	4 hours
	LD50 Dermal	Rat	>7000 mg/kg	-
	LD50 Oral	Rat	746 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Aliphatic polyisocyanate.	Skin - Mild irritant	Rabbit	-	4 hours	-
	Eyes - Mild irritant	Rabbit	-	-	-
xylene	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
mesitylene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitisation

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

Potential chronic health effects

General : No known significant effects or critical hazards.

Inhalation : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Aliphatic polyisocyanate.	Sub-chronic NOAEL Inhalation Dusts and mists	Rat - Male, Female	3.3 mg/m³	90 days; 6 hours per day

Carcinogenicity

Not available.

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

Teratogenicity

Section 11. Toxicological information

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity

Name	Category	Route of exposure	Target organs
xylene	Category B	Oral	Not determined
		Inhalation	Not determined
1,2,4-trimethylbenzene	Category B	Inhalation	Not determined
ethylbenzene	Category B	Inhalation	Not determined
hexamethylene-di-isocyanate	Category A	Inhalation	Not determined

Aspiration hazard

Name
Solvent naphtha (petroleum), light arom.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	3484.9 mg/kg
Dermal	11178.9 mg/kg
Inhalation (vapours)	48.8 mg/l
Inhalation (dusts and mists)	5.813 mg/l

Section 12. Ecological information

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Aliphatic polyisocyanate.	Acute EC50 >1000 mg/l	Algae - Scenedesmus subspicatus	72 hours
	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 >1000 mg/l	Algae - Pseudokirchnerella subcapitata	96 hours
	Acute EC50 408 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 134 mg/l	Fish - Oncorhynchus mykiss	96 hours
n-butyl acetate	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	Crustaceans - Artemia salina	48 hours
	Acute LC50 18 mg/l	Fish - Pimephales promelas	96 hours
	Acute NOEC 200 mg/l	Algae	72 hours
xylene	Acute EC50 1 to 10 mg/l	Algae	72 hours
	Acute EC50 1 to 10 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 to 10 mg/l	Fish	96 hours
Solvent naphtha (petroleum), light arom.	Acute EC50 2.9 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3.2 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.2 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute NOEC >1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
1,2,4-trimethylbenzene	Acute EC50 1 to 10 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 >1.8 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 >10 mg/l	Fish - Pimephales promelas	96 hours

Persistence/degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Aliphatic polyisocyanate.	EU 67/548/EEC ANNEX V, C.4.E.	1 % - Not readily - 28 days	-	-
2-methoxy-1-methylethyl acetate	OECD 302B Inherent Biodegradability: Zahn-Wellens/ EMPA Test	100 % - 28 days	-	-
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	83 % - 28 days	-	-
n-butyl acetate	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
2-methoxy-1-methylethyl acetate	-	-	Readily
n-butyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Aliphatic polyisocyanate.	5.54	367.7	low
2-methoxy-1-methylethyl acetate	1.2	-	low
n-butyl acetate	2.3	-	low
xylene	3.12	8.1 to 25.9	low
1,2,4-trimethylbenzene	3.63	243	low
ethylbenzene	3.6	-	low
mesitylene	3.42	161	low
hexamethylene-di-isocyanate	0.02	57.63	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : 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

Section 13. Disposal considerations

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

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
New Zealand Class	UN1263	PAINT RELATED MATERIAL	3	III		**Hazchem code** 3Y **Special provisions** 163, 223
ADG Class	UN1263	PAINT RELATED MATERIAL	3	III		**Hazchem code** •3Y **Special provisions** 163, 223
UN Class	UN1263	PAINT RELATED MATERIAL	3	III		**Special provisions** 163, 223
ADR/RID Class	UN1263	PAINT RELATED MATERIAL	3	III		**Hazard identification number** 30 **Limited quantity** 5 L **Special provisions** 163, 640E, 650 **Tunnel code** (D/E)
IATA Class	UN1263	Paint related material	3	III		**Passenger and Cargo Aircraft** Quantity limitation: 60 L Packaging instructions: 355 **Cargo Aircraft Only** Quantity limitation: 220 L Packaging instructions: 366 **Limited Quantities - Passenger Aircraft** Quantity limitation: 10 L Packaging instructions: Y344 **Special provisions** A3, A72

Section 14. Transport information

IMDG Class	UN1263	PAINT RELATED MATERIAL	3	III		**Emergency schedules (EmS)** F-E, _S-E_ **Special provisions** 163, 223, 955

PG* : Packing group

Section 15. Regulatory information

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

HSNO Approval Number : HSR002669

HSNO Group Standard : Surface Coatings and Colourants

HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category C
6.1 - ACUTE TOXICITY (oral) - Category E
6.3 - SKIN IRRITATION - Category B
6.4 - EYE IRRITATION - Category A (Irritant)
6.5 - SENSITIZATION - Category A (Respiratory)
6.7 - CARCINOGENICITY - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B
6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B
9.1 - AQUATIC ECOTOXICITY - Category C

Australia inventory (AICS) : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Malaysia : 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.

Turkey : All components are listed or exempted.

United States : All components are listed or exempted.

Section 16. Other information

History

Date of printing : 22/09/2017

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Date of previous issue : 06/06/2017

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)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

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