SAFETY DATA SHEET

MOBIHEL 2K HARDENER 1300

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	16.11.2023	MAT000416726 AU/EN	Date of first issue: 16.11.2023

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : MOBIHEL 2K HARDENER 1300

Product code : 41672602

Manufacturer or supplier's details

Details of the supplier of the safety data sheet

Company : Helios Coatings Australia Pty Ltd
50 Clapham Road
SEFTON NSW 2162
Australia

Telephone : 61 2 9645 3188
E-mail address Responsible/issuing person : 61 2 9645 3188
info@helioscoatings.com.au

Emergency telephone number

112 (mobile) Ambulance 000, Poisons Information Centre: 131 126

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Skin sensitisation : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P261 Avoid breathing mist or vapours.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Hexamethylene diisocyanate, oligomers	28182-81-2	>= 30 -< 60
2-ethoxy-1-methylethyl acetate	54839-24-6	>= 10 -< 20
2-butoxyethyl acetate	112-07-2	>= 10 -< 30
n-butyl acetate	123-86-4	< 10
Hydrocarbons, C9 aromatics	128601-23-0	>= 1 -< 10
solvent naphtha (petroleum), light aromatic	64742-95-6	>= 1 -< 10

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.
In case of skin contact	:	If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire-fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

Hazchem Code : •3Y

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Hygiene measures : Wash hands before breaks and at the end of workday.

Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hexamethylene-di-isocyanate, polymer	28182-81-2	TWA	0.02 mg/m3 (NCO)	AU OEL
	Further information: Sensitiser			
		STEL	0.07 mg/m3 (NCO)	AU OEL
	Further information: Sensitiser			
2-butoxyethyl acetate	112-07-2	STEL	50 ppm 333 mg/m3	AU OEL
	Further information: Skin absorption			
		TWA	20 ppm 133 mg/m3	AU OEL
	Further information: Skin absorption			
		TWA	20 ppm	ACGIH
n-butyl acetate	123-86-4	STEL	200 ppm 950 mg/m3	AU OEL
		TWA	150 ppm 713 mg/m3	AU OEL
		TWA	50 ppm	ACGIH
		STEL	150 ppm	ACGIH
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	TWA	900 mg/m3	AU OEL

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Organic vapour type

Hand protection

Gloves : Viton® (> 0,6 mm; < 240 min); DIN EN374
PE laminate (> 0,1 mm; < 240 min); DIN EN374

Remarks : Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of

cuts, abrasion, and the contact time.

Eye protection	:	Equipment should conform to EN 166 Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colourless
Odour	:	solvent-like
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	-89.0 °C (calculation method (principal components, lowest value))
Boiling point/boiling range	:	126 °C (calculation method (principal components, lowest value))
Flash point	:	37 °C
Flammability (solid, gas)	:	Static-accumulating flammable liquid., Combustible Solids
Upper explosion limit / Upper flammability limit	:	10.1 %(V)
Lower explosion limit / Lower flammability limit	:	1 %(V)
Vapour pressure	:	< 1,100 hPa (50 °C)
Relative vapour density	:	5.5 (Air = 1.0)
Relative density	:	0.95
Density	:	1.013 g/cm3
Solubility(ies)		
Water solubility	:	immiscible, partly soluble

Solubility in other solvents	:	Description: miscible with most organic solvents
Partition coefficient: n-octanol/water	:	log Pow: 1.81
Auto-ignition temperature	:	280 °C
Decomposition temperature	:	No decomposition if stored and applied as directed. Hazardous decomposition products formed under fire conditions.
Viscosity		
Viscosity, kinematic	:	> 20.5 mm2/s (40 °C)
Flow time	:	12 s (20 °C) Cross section: 4 mm Method: DIN 53211
Explosive properties	:	Not applicable
Oxidizing properties	:	Sustains combustion

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Incompatible with strong acids and bases.
Hazardous decomposition products	:	Adequate ventilation is required. Heating can release vapours which can be ignited. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

Hexamethylene-di-isocyanate, polymer:

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

2-butoxyethyl acetate:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

LD50 Oral (Rat): >= 2,400 mg/kg

Acute inhalation toxicity : LC50 (Rat): >= 50 mg/l
Exposure time: 2 h
Test atmosphere: vapour

Acute dermal toxicity : Assessment: The component/mixture is moderately toxic after single contact withskin.

LD50 (Rabbit): >= 1,500 mg/kg

n-butyl acetate:

Acute oral toxicity : LD50 Oral (Rat): >= 10,760 mg/kg

Acute dermal toxicity : LD50 (Rabbit): >= 5,000 mg/kg

Hydrocarbons, C9 aromatics:

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Product:

Remarks : May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitisation

Product:

Remarks : Causes sensitisation.

Components:

Hexamethylene-di-isocyanate, polymer:

Result : Probability or evidence of skin sensitisation in humans

Chronic toxicity

Germ cell mutagenicity

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Germ cell mutagenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

STOT - single exposure

Components:

Hexamethylene-di-isocyanate, polymer:

Assessment : May cause respiratory irritation.

2-ethoxy-1-methylethyl acetate:

Assessment : May cause drowsiness or dizziness.

n-butyl acetate:

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C9 aromatics:

Assessment : May cause drowsiness or dizziness.

Assessment : May cause respiratory irritation.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : May cause drowsiness or dizziness.

Assessment : May cause respiratory irritation.

Aspiration toxicity

Components:

Hydrocarbons, C9 aromatics:

May be fatal if swallowed and enters airways.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2-butoxyethyl acetate:

Toxicity to fish : LC50 (Fish): >= 31 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): >= 142.5 mg/l
Exposure time: 48 h

Toxicity to microorganisms : EC50 (Bacteria): >= 2,800 mg/l

n-butyl acetate:

Toxicity to algae/aquatic plants : NOEC (Desmodesmus subspicatus (green algae)): > 200 mg/l

EC50 (Desmodesmus subspicatus (green algae)): >= 647.7 mg/l
Exposure time: 72 h

Toxicity to microorganisms : IC50 (Tetrahymena pyriformis): 356 mg/l

Exposure time: 40 h

Hydrocarbons, C9 aromatics:

Toxicity to fish : LC50 (Fish): >= 9.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): >= 3.2 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : LC50 (Fish): > 1 - 10 mg/l

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): > 1 - 10 mg/l

Toxicity to microorganisms : EC50 (Bacteria): > 1 - 10 mg/l

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

2-butoxyethyl acetate:

Biodegradability : Result: Biodegradable

n-butyl acetate:

Biodegradability : Result: Biodegradable
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Stability in water : Degradation half life: 78 d pH: 8
Remarks: Hydrolyses slowly.

Photodegradation : Remarks: Decomposes rapidly in contact with light.

Bioaccumulative potential

Components:

2-ethoxy-1-methylethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 0.76

2-butoxyethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 1.51

n-butyl acetate:

Bioaccumulation : Bioconcentration factor (BCF): 15
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 1.81

Hydrocarbons, C9 aromatics:

Partition coefficient: n-octanol/water : log Pow: < 4

Mobility in soil

Components:

Hydrocarbons, C9 aromatics:

Mobility : Medium: Air
Content: 92.9 %

Medium: Water
Content: 3.5 %

Medium: Soil
Content: 1.9 %

Medium: Sediment
Content: 1.8 %

Distribution among environmental compartments : Koc: 1.71 - 14.70
Remarks: Mobile in soils

Remarks: The product is insoluble and floats on water.

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1263
Proper shipping name	:	PAINT
Class	:	3
Packing group	:	III
Labels	:	3

IATA-DGR

UN/ID No.	:	UN 1263
Proper shipping name	:	Paint
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1263
Proper shipping name	:	PAINT
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

UN number	:	UN 1263
Proper shipping name	:	PAINT
Class	:	3
Packing group	:	III
Labels	:	3
Hazchem Code	:	•3Y

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

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

Standard for the Uniform Scheduling of Medicines and Poisons	:	Schedule 6
Prohibition/Licensing Requirements	:	There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.

SECTION 16. OTHER INFORMATION

Revision Date	:	16.11.2023
Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
AU OEL	:	Australia. Workplace Exposure Standards for Airborne Contaminants.
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
AU OEL / TWA	:	Exposure standard - time weighted average
AU OEL / STEL	:	Exposure standard - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Or-

ganisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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