

## SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010 - United Kingdom (UK)

Print Date: 01.05.2020

Date of Issue / Date of Revision: 20.01.2015

Version Number: 1

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

#### 1.1 Product identifier

Product description : Paint.

Product type : Liquid.

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

Identified uses	
Industrial uses: Uses of substances as such or in preparations* at industrial sites Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

#### 1.3 Details of the supplier of the safety data sheet

Cactus Industrial Limited  
Unit 11, Block 6 Trading Estate, Third Road,  
Blantyre Industrial Estate  
Blantyre  
Scotland  
G72 0UP  
www.cactusindustrial.com  
info@cactusindustrial.com  
+44(0) 1698 591 635

#### 1.4 Emergency telephone number: +44 (0) 1698 591 635

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Product definition : Mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Sens. 1, H317

Aquatic Chronic 3, H412

##### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R43  
R52/53

Human health hazards : May cause sensitisation by skin contact.

Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

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### SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label elements

Hazard pictograms :



Signal word :

Warning

Hazard statements :

May cause an allergic skin reaction.  
Harmful to aquatic life with long lasting effects.

#### Precautionary statements

Prevention :

Wear protective gloves and eye protection: polyethylene/ethylene vinyl alcohol (PE/EVAL) gloves and Safety glasses with side shields.

Response :

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Storage :

Not applicable.

Disposal :

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

Supplemental label elements :

Not applicable.

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

Not applicable.

#### Special packaging requirements

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Not applicable.

#### 2.3 Other hazards

Other hazards which do not result in classification :

None known.

### SECTION 3: Composition/information on ingredients

Substance/mixture :

Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	REACH #: 01-0000017556-46 CAS: 136210-30-5 Index: 607-521-00-8	2,5 - <25	R43 R52/53	Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	REACH #: 01-0000015937-58 EC: 412-060-9 CAS: 136210-32-7 Index: 607-350-00-9	2,5 - <25	R43 R52/53	Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
hydrocarbons, aromatic, C9	REACH #: 01-2119455851-35	5 - <10	R10 Xn; R65	Flam. Liq. 3, H226 STOT SE 3, H335 and	[1]

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### SECTION 3: Composition/information on ingredients

	EC: 918-668-5 Index: 649-356-00-4		Xi; R37 R66, R67 N; R51/53 Xn; R22	H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Acute Tox. 4, H302	
diethyl fumarate	EC: 210-819-7 CAS: 623-91-6	1 - <3			[1]
pentamethyl-4-piperidyl sebacate	REACH #: 01-2119491304-40 EC: 255-437-1 CAS: 41556-26-7	0,25 - <1	R43 N; R50/53	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	EC: 280-060-4 CAS: 82919-37-7	0,25 - <1	R43 N; R50/53	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
			<b>See Section 16 for the full text of the R-phrases declared above.</b>	<b>See Section 16 for the full text of the H statements declared above.</b>	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### Type

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

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

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

#### 4.2 Most important symptoms and effects, both acute and delayed

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#### SECTION 4: First aid measures

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate, bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, Pine Oil. May produce an allergic reaction.

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

See toxicological information (Section 11)

#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media

**Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray.

**Unsuitable extinguishing media** : Do not use water jet.

##### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

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

##### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

**Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.

**Additional information** : No unusual hazard if involved in a fire.

#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

**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".

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### SECTION 6: Accidental release measures

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- 6.3 Methods and materials for containment and cleaning up** : 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). Preferably clean with a detergent. Avoid using solvents.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

### SECTION 7: Handling and storage

- 7.1 Precautions for safe handling** : Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.  
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.  
Put on appropriate personal protective equipment (see Section 8).  
Never use pressure to empty. Container is not a pressure vessel.  
Always keep in containers made from the same material as the original one.  
Comply with the health and safety at work laws.  
Do not allow to enter drains or watercourses.
- 7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations.  
**Notes on joint storage**  
Keep away from: oxidising agents, strong alkalis, strong acids.  
**Additional information on storage conditions**  
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking.  
Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
- 7.3 Specific end use(s) Recommendations** : Not available.  
**Industrial sector specific solutions** : Not available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational exposure limits

No exposure limit value known.

##### **Recommended monitoring procedures**

- : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures

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for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	DNEL	Long term Oral, Dermal	4 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	28 mg/m <sup>3</sup>	Workers	Systemic

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	Fresh water	0,00013 mg/l	-
	Marine	0,000013 mg/l	-
	Fresh water sediment	0,21 mg/kg dwt	-
	Marine water sediment	0,02 mg/kg dwt	-
	Soil	0,1 mg/kg dwt	-
	Sewage Treatment Plant	31,1 mg/l	-
	Secondary Poisoning	66,67 mg/kg	-

### 8.2 Exposure controls

#### Appropriate engineering controls

- : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

#### 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 glasses with side shields. (EN 166)

##### Skin protection

##### Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

##### Gloves

- : For prolonged or repeated handling, use the following type of gloves:  
Recommended: > 8 hours (breakthrough time): polyethylene/ethylene vinyl alcohol (PE/EVAL) gloves

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

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## SECTION 8: Exposure controls/personal protection

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

- |  |  |
|--|--|
| <b>Body protection</b>                 | : Wear overalls or long sleeved shirt. (EN 467)  |
| <b>Other skin protection</b>           | : 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.  |
| <b>Respiratory protection</b>          | : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.<br><br>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.<br>Recommended: organic vapour (Type A) and particulate filter (EN 141) |
| <b>Environmental exposure controls</b> | : Do not allow to enter drains or watercourses.  |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- |   |                   |
|---|-------------------|
| <b>Physical state</b>                               | : Liquid.         |
| <b>Colour</b>                                       | : Grey. [Light]   |
| <b>Odour</b>  | : Not available.  |
| <b>pH</b>   | : Not available.  |
| <b>Melting point/freezing point</b>                 | : Not available.  |
| <b>Initial boiling point and boiling range</b>      | : Not available.  |
| <b>Flash point</b>                                  | : Not available.  |
| <b>Evaporation rate</b>                             | : Not available.  |
| <b>Flammability (solid, gas)</b>                    | : Not available.  |
| <b>Burning time</b>                                 | : Not applicable. |
| <b>Burning rate</b>                                 | : Not applicable. |
| <b>Upper/lower flammability or explosive limits</b> | : Not available.  |
| <b>Vapour pressure</b>                              | : Not available.  |
| <b>Vapour density</b>                               | : Not available.  |
| <b>Relative density</b>                             | : 1,728           |
| <b>Solubility(ies)</b>                              | : Not available.  |
| <b>Solubility in water</b>                          | : Not available.  |
| <b>Partition coefficient: n-octanol/water</b>       | : Not available.  |
| <b>Auto-ignition temperature</b>                    | : Not available.  |
| <b>Decomposition temperature</b>                    | : Not available.  |
| <b>Viscosity</b>                                    | : Not available.  |
| <b>Explosive properties</b>                         | : Not available.  |
| <b>Oxidising properties</b>                         | : Not available.  |

### 9.2 Other information

No additional information.

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### SECTION 10: Stability and reactivity

- 10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
If involved in a fire, toxic gases including CO, CO<sub>2</sub> and smoke can be generated.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate, bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, Pine Oil. May produce an allergic reaction.

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	LC50 Inhalation Dusts and mists	Rat	>4224 mg/m <sup>3</sup>	4 hours
hydrocarbons, aromatic, C9	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Oral	Mouse	8400 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
diethyl fumarate	LD50 Oral	Rat	1780 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
pentamethyl-4-piperidyl sebacate	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Acute toxicity estimates

Not available.



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### SECTION 11: Toxicological information

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Redness of the conjunctivae	Rabbit	1	-	-
hydrocarbons, aromatic, C9	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
pentamethyl-4-piperidyl sebacate	Skin - Oedema	Rabbit	0	-	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Skin - Oedema	Rabbit	0	-	-

#### Conclusion/Summary

**Skin** : Based on available data, the classification criteria are not met.  
**Eyes** : Based on available data, the classification criteria are not met.  
**Respiratory** : Based on available data, the classification criteria are not met.

#### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	skin	Guinea pig	Sensitising
pentamethyl-4-piperidyl sebacate	skin	Guinea pig	Sensitising
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	skin	Guinea pig	Sensitising

#### Conclusion/Summary

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

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal	Negative
hydrocarbons, aromatic, C9	OECD 471	Subject: Bacteria	Negative
pentamethyl-4-piperidyl sebacate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Carcinogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
hydrocarbons, aromatic, C9	-	-	Negative	Mammal - species unspecified	Unreported	-

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### SECTION 11: Toxicological information

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Teratogenicity**

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
hydrocarbons, aromatic, C9	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Product/ingredient name	Result
hydrocarbons, aromatic, C9	ASPIRATION HAZARD - Category 1

**Other information** : Not available.

### SECTION 12: Ecological information

**12.1 Toxicity**

There are no data available on the mixture itself.  
Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	Acute EC50 88,6 mg/l	Daphnia spec.	48 hours
	Acute IC50 113 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute LC50 66 mg/l	Fish	96 hours
diethyl fumarate	Chronic NOEC 0,01 mg/l	Daphnia spec.	21 days
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 1,68 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours
	Acute EC50 >100 mg/l	Bacteria	3 hours
	Acute EC50 20 mg/l	Daphnia spec.	24 hours
pentamethyl-4-piperidyl sebacate	Acute LC50 0,97 mg/l	Fish	96 hours
	Acute LC50 7,9 mg/l	Fish	96 hours
	Chronic NOEC 1 mg/l	Daphnia spec.	21 days
	Acute EC50 1,68 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours
	Acute EC50 >100 mg/l	Bacteria	3 hours
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Acute EC50 20 mg/l	Daphnia spec.	24 hours
	Acute LC50 0,97 mg/l	Fish	96 hours
	Acute LC50 7,9 mg/l	Fish	96 hours
	Chronic NOEC 1 mg/l	Daphnia spec.	21 days
	Acute EC50 1,68 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours

**Conclusion/Summary** : Harmful to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

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### SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	OECD 301F	13 % - Not readily - 28 days	-	-
pentamethyl-4-piperidyl sebacate	OECD 302C OECD 301F	0 % - Not readily - 28 days 38 % - Not readily - 28 days	- -	- -
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	OECD 301F	38 % - Not readily - 28 days	-	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met. This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	Fresh water 28 days Fresh water 1 days Fresh water 0,7 days	-	Not readily
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	-	-	Not readily
hydrocarbons, aromatic, C9	-	-	Readily
pentamethyl-4-piperidyl sebacate	-	-	Not readily
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	-	-	Not readily

#### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl) bis-dl-aspartate	5,16	1872	high
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	-	8228	high
hydrocarbons, aromatic, C9	3.7 to 4.5	-	high
pentamethyl-4-piperidyl sebacate	2.4 to 2.8	-	low
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	2.4 to 2.8	-	low

#### 12.4 Mobility in soil

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

**Mobility** : Not available.

#### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

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

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

##### European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

##### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Not emptied containers are hazardous waste.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-		
14.5 Environmental hazards	No.	No.	No.
Additional information			

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### SECTION 14: Transport information

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

### SECTION 15: Regulatory information

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

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

CN code : 3209 90 00

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

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Other EU regulations

**VOC for Ready-for-Use Mixture** : 2004/42/EC - IIA/j: 550g/l (2007) 500g/l (2010). <= 160g/l VOC.

**Europe inventory** : Not determined.

#### National regulations

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

### SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Skin Sens. 1, H317	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

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<b>Full text of abbreviated H statements</b>	: H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. May cause drowsiness or dizziness. and H336 H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
<b>Full text of classifications [CLP/GHS]</b>	: Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4 Aquatic Acute 1, H400 AQUATIC TOXICITY (ACUTE) - Category 1 Aquatic Chronic 1, H410 AQUATIC TOXICITY (CHRONIC) - Category 1 Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2 Aquatic Chronic 3, H412 AQUATIC TOXICITY (CHRONIC) - Category 3 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1 STOT SE 3, H335 and SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3 H336
<b>Full text of abbreviated R phrases</b>	: R10- Flammable. R22- Harmful if swallowed. R65- Harmful: may cause lung damage if swallowed. R37- Irritating to respiratory system. R43- May cause sensitisation by skin contact. R66- Repeated exposure may cause skin dryness or cracking. R67- Vapours may cause drowsiness and dizziness. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Full text of classifications [DSD/DPD]</b>	: Xn - Harmful Xi - Irritant N - Dangerous for the environment
<b>Date of printing</b>	: 17/07/2015.
<b>Date of issue/ Date of revision</b>	: 21/01/2015.
<b>Date of previous issue</b>	: No previous validation.
<b>Version</b>	: 1

### Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.