

SAFETY DATA SHEET

NanoSign-Coatex Shield Base

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

1.1 Product identifier

Product name : NanoSign-Coatex Shield Base
Product description : Coating.
Product type : Liquid.

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

Identified uses	
Professional use Industrial use	
Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Europe - Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
 Fax no.: +32 (0) 13 460 201

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

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]

Flam. Liq. 3, H226
 Eye Dam. 1, H318
 Skin Sens. 1, H317
 STOT SE 3, H336
 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
 See Section 16 for the full text of the H statements declared above.
 See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

SECTION 2: Hazards identification

Hazard statements	: Flammable liquid and vapour. Causes serious eye damage. May cause an allergic skin reaction. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects.
<u>Precautionary statements</u>	
General	: Not applicable.
Prevention	: P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking. P261 - Avoid breathing vapour. P280 - Wear protective gloves and eye protection: - nitrile rubber or butyl rubber gloves Safety glasses with side shields.
Response	: P305 - IF IN EYES: P351 - Rinse cautiously with water for several minutes. P338 - Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a doctor. P302 - IF ON SKIN: P352 - Wash with plenty of soap and water. P333 - If skin irritation or rash occurs: P313 - Get medical attention.
Storage	: P403 - Store in a well-ventilated place. P235 - Keep cool. P405 - Store locked up.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane n-butyl acetate butan-1-ol
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.
<u>Special packaging requirements</u>	
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

3.2 Mixtures	: Mixture
---------------------	-----------

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	REACH #: 01-2119959495-22 EC: 500-070-7 CAS: 30583-72-3	≥10 - ≤25	Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤10	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
DPG-DME	REACH #: 01-0000015420-83 EC: 404-640-5 CAS: 111109-77-4	≤3	Skin Irrit. 2, H315	[1] [2]
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	REACH #: 01-2119491304-40 EC: 255-437-1 CAS: 41556-26-7	≤3	Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	EC: 280-060-4 CAS: 82919-37-7	≤1	Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≤1	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370 See Section 16 for the full text of the H statements declared above.	[1] [2]

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

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[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.

SECTION 4: First aid measures

- | | |
|-----------------------------------|---|
| 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

4.2 Most important symptoms and effects, both acute and delayed

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.

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 4,4'-isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, May produce an allergic reaction.

Over-exposure signs/symptoms

- | | |
|---------------------|---|
| Eye contact | : Adverse symptoms may include the following:
pain
watering
redness |
| Inhalation | : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness |
| Skin contact | : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur |
| Ingestion | : Adverse symptoms may include the following:
stomach pains |

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, CO₂, 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** : 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
halogenated compounds

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- 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** : 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 spill material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

SECTION 6: Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling : Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. 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.

Information on fire and explosion protection
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

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.

Seveso Directive - Reporting thresholds (in tonnes)

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Methanol	500	5000

Danger criteria

SECTION 7: Handling and storage

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b	5000	50000

7.3 Specific end use(s)**Recommendations** : Not available.**Industrial sector specific solutions** : Not available.**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits**

Product/ingredient name	Exposure limit values
n-butyl acetate	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 966 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 724 mg/m ³ 8 hours. TWA: 150 ppm 8 hours.
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.
DPG-DME	Recommended by manufacturer (Europe, 4/2011). TWA: 20 ppm 8 hours.
methanol	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 333 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.

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 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

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
n-butyl acetate	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral, Dermal	3,4 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	960 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	960 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	480 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	480 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	859,7 mg/m ³	Consumers	Systemic
	DNEL	Short term Inhalation	859,7 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	102,34 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	102,34 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	310 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	55 mg/m ³	Consumers	Local
butan-1-ol	DNEL	Long term Oral	3,125 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	3,125 mg/kg bw/day	Consumers	Systemic
DPG-DME	DNEL	Long term Dermal	22,1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	133 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	5,26 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	15,79 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	1,67 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
n-butyl acetate	Fresh water	0,18 mg/l	-
	Marine	0,018 mg/l	-
	Fresh water sediment	0,981 mg/kg	-
	Marine water sediment	0,0981 mg/kg	-
	Soil	0,0903 mg/kg	-
	Sewage Treatment Plant	35,6 mg/l	-
	Plant		
butan-1-ol	Fresh water	0,082 mg/l	-
	Marine	0,0082 mg/l	-
	Fresh water sediment	0,178 mg/kg	-
	Marine water sediment	0,0178 mg/kg	-
	Soil	0,015 mg/kg	-
	Sewage Treatment Plant	2476 mg/l	-
	Plant		
DPG-DME	Fresh water	1 mg/l	-
	Marine	0,1 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Plant		
	Sediment	1,16 mg/kg dwt	-
	Soil	0,1 mg/kg dwt	-

SECTION 8: Exposure controls/personal protection

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 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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: butyl rubber (0.6 mm) or nitrile rubber 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

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.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : 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: organic vapour filter (Type A) Brown. (EN 140)

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Colour	: Not available.
Odour	: Not available.
Odour threshold	: Not available.
pH	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and boiling range	: Not available.
Flash point	: Closed cup: 37°C
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Upper/lower flammability or explosive limits	: Not available.
Vapour pressure	: Not available.
Vapour density	: Not available.
Relative density	: 1,05
Solubility(ies)	: Not available.
Partition coefficient: n-octanol/ water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

No additional information.

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 ₂ and smoke can be generated.

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

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LC50 Inhalation Vapour	Rat	>21 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	9700 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	14000 mg/kg	-
butan-1-ol	LC50 Inhalation Vapour	Rat	25 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LC50 Inhalation Vapour	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
DPG-DME	LD50 Oral	Rat	0,79 g/kg	-
	LC50 Inhalation Vapour	Rat	>5,25 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	3300 mg/kg	-
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
methanol	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Gas.	Cat	23600 ppm	6 hours
	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LD50 Intraperitoneal	Rabbit	1826 mg/kg	-
	LD50 Oral	Mouse	5800 mg/kg	-

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

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	0	-	-
butan-1-ol	Eyes - Cornea opacity	Rabbit	1	-	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Skin - Oedema	Rabbit	0	-	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Skin - Oedema	Rabbit	0	-	-
methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Conclusion/Summary**Eyes** : Causes serious eye damage.

SECTION 11: Toxicological information**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
Bis(1,2,2,6,6-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.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
butan-1-ol	OECD 471 Bacterial Reverse Mutation Test	Subject: Bacteria	Negative
Bis(1,2,2,6,6-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 : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
n-butyl acetate	Category 3	Not applicable.	Narcotic effects
butan-1-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
methanol	Category 1	Not determined	Not determined

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

SECTION 11: Toxicological information

Conclusion/Summary	: Not available.
General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

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
n-butyl acetate	Acute EC10 956 mg/l Acute EC50 648 mg/l	Bacteria - Pseudomonas putida	18 hours
		Algae - Desmodesmus subspicatus	72 hours
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
	Acute LC50 18 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 62 mg/l	Fish - Danio rerio	96 hours
butan-1-ol	Acute EC50 2072 to 1983000 µg/l Fresh water	Daphnia spec. - Daphnia magna	48 hours
	Acute LC50 1940000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
DPG-DME	Acute LC50 >1000 mg/l	Fish - Poecilia reticulata	96 hours
	Acute NOEC >300 mg/l	Fish	14 hours
	Chronic NOEC 10 mg/l	Daphnia spec.	21 days
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	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
	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
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	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
	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
methanol	Acute EC50 16,912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia spec. - Daphnia magna - Neonate	48 hours
	Acute LC50 1000 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours

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

12.2 Persistence and degradability

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
n-butyl acetate	-	90 % - Readily - 28 days	-	-
butan-1-ol	OECD 301B	>70 % - Readily - 19 days	-	-
DPG-DME	OECD 302B	25 % - 28 days	-	-
	OECD 301B	18 to 32 % - 28 days	-	-
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	OECD 301F	38 % - Not readily - 28 days	-	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	OECD 301F	38 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
butan-1-ol	-	-	Readily
DPG-DME	-	-	Inherent
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	-	-	Not readily
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	-	-	Not readily
methanol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
n-butyl acetate	2,3	10	low
butan-1-ol	1	-	low
DPG-DME	0,42	4	low
Bis(1,2,2,6,6-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
methanol	-0,77	<10	low

12.4 Mobility in soil**Soil/water partition coefficient (K_{oc})** : Not available.**Mobility** : Not available.**12.5 Results of PBT and vPvB assessment****PBT** : Not applicable.**vPvB** : Not applicable.**12.6 Other adverse effects** : No known significant effects or critical hazards.**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods**Product**

SECTION 13: Disposal considerations

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

Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- 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. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

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

SECTION 14: Transport information

Additional information	Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4 ADR Tunnel code: (D/E)		Emergency schedules (EmS): F-E + S-E Marine pollutant: NO Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6	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: Y 344
-------------------------------	---	--	---	--

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****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 : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/j: 500g/l (2010). ≤ 275g/l VOC.

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Named substances**Name**

Methanol

SECTION 15: Regulatory information

Danger criteria

Category

P5c: Flammable liquids 2 and 3 not falling under P5a or P5b

National regulations

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.

References

: EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830

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.

CN code : 3208 90 91

International lists

National inventory

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Turkey	: Not determined.
United States	: Not determined.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

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
Flam. Liq. 3, H226 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H336 Aquatic Chronic 3, H412	Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment

Full text of H-phrases referred to in sections 2 and 3**Full text of abbreviated H statements**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 3, H301	ACUTE TOXICITY (oral) - Category 3
Acute Tox. 3, H311	ACUTE TOXICITY (dermal) - Category 3
Acute Tox. 3, H331	ACUTE TOXICITY (inhalation) - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1
Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
Skin Sens. 1A, H317	SKIN SENSITISATION - Category 1A
STOT SE 1, H370	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Date of printing : 15/06/2017

Date of issue/ Date of revision : 15/06/2017

SECTION 16: Other information

Date of previous issue : 15/06/2017

Version : 2.02

Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. 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.