

# SAFETY DATA SHEET



Date of issue/Date of revision

: 26 April 2024

Version

: 2.02

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

### 1.1 Product identifier

**Product name** : SIGMAGUARD CSF 650 HARDENER GREEN  
**Product code** : 00393867  
**Product type** : Liquid.  
**Other means of identification** : Not available.

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

**Product use** : Professional applications, Used by spraying.  
**Use of the substance/mixture** : Coating.  
**Uses advised against** : Product is not intended, labelled or packaged for consumer use.

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

PPG Coatings Belgium BV/SRL  
Tweemontstraat 104  
B-2100 Deurne  
Belgium  
Telephone +32-33606311  
Fax +32-33606435

**e-mail address of person responsible for this SDS** : Product.Stewardship.EMEA@ppg.com

### 1.4 Emergency telephone number

Supplier  
+31 20 4075210

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture  
Classification according to UK CLP/GHS

Acute Tox. 4, H302  
Acute Tox. 3, H311  
Acute Tox. 3, H331  
Skin Corr. 1A, H314  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
Aquatic Chronic 2, H411

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 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

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SECTION 2: Hazards identification

Hazard statements	: Harmful if swallowed. Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	: Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment.
Response	: Collect spillage. IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Storage	: Not applicable.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations. P280, P273, P391, P304 + P310, P301 + P310, P501
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	
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

Product/ingredient name	Identifiers	%	Classification	Type
2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine)	EC: 229-962-1 CAS: 6864-37-5 Index: 612-110-00-1	≥50 - ≤75	Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤19	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	≥5.0 - ≤10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
2,4,6-tris(dimethylaminomethyl)	REACH #:	≥1.0 - ≤5.0	Acute Tox. 4, H302	[1]

English (GB)

United Kingdom (UK)

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### SECTION 3: Composition/information on ingredients

phenol	01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0		Acute Tox. 4, H312 Skin Corr. 1C, H314 Eye Dam. 1, H318	
N-(3-(trimethoxysilyl)propyl) ethylenediamine	EC: 217-164-6 CAS: 1760-24-3	≥1.0 - ≤5.0	Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335 <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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

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

**SUB codes represent substances without registered CAS Numbers.**

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- 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. 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

##### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Toxic if inhaled.
- Skin contact** : Causes severe burns. Toxic in contact with skin. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.

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## SECTION 4: First aid measures

- Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 dryness  
 cracking  
 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.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

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

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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 combustion products** : Decomposition products may include the following materials:  
 carbon oxides  
 nitrogen oxides  
 metal oxide/oxides  
 Formaldehyde.

### 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.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

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

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**SECTION 6: Accidental release measures**

**6.3 Methods and material for containment and cleaning up**

<b>Small spill</b>	: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

<b>6.4 Reference to other sections</b>	: 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.
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**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

<b>Protective measures</b>	: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

See Section 1.2 for Identified uses.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Occupational exposure limits

Product/ingredient name	Exposure limit values
butanone	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 899 mg/m³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 600 mg/m³ 8 hours. TWA: 200 ppm 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices
butanone	BUTANONE / ETHYL METHYL KETONE

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. 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
2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine)	DNEL	Long term Oral	0.008 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.05 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Systemic
benzyl alcohol	DNEL	Long term Inhalation	1 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	5.4 mg/m³	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m³	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m³	Workers	Systemic
	DNEL	Long term Oral	31 mg/kg bw/day	General population	Systemic
butanone	DNEL	Long term Inhalation	106 mg/m³	General population	Systemic
	DNEL	Long term Dermal	412 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	450 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	600 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	900 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	1161 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	0.13 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	0.13 mg/m³	General population	Systemic
	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic
2,4,6-tris (dimethylaminomethyl)phenol	DNEL	Long term Inhalation	0.53 mg/m³	Workers	Systemic
	DNEL	Short term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	2.1 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	0.1 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4 mg/m³	General population	Local
N-(3-(trimethoxysilyl)propyl) ethylenediamine	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m³	Workers	Local
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4 mg/m³	General population	Local



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SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	5.36 mg/m³	Workers	Local
	DNEL	Long term Inhalation	26 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	130 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	26400 mg/m³	General population	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
butanone	Fresh water	55.8 mg/l	Sensitivity Distribution
	Marine water	55.8 mg/l	Sensitivity Distribution
	Sewage Treatment Plant	709 mg/l	Sensitivity Distribution
	Fresh water sediment	284.74 mg/kg dw	Equilibrium Partitioning
	Marine water sediment	284.7 mg/kg dw	Equilibrium Partitioning
	Soil	22.5 mg/kg dw	Equilibrium Partitioning

8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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** : Chemical splash goggles and face shield.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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.  
nitrile neoprene
- 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.
- 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
- 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.

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SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state

Colour

Odour

Odour threshold

Melting point/freezing point

Initial boiling point and boiling range

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Flash point

Auto-ignition temperature

Ingredient name

°C

°F

Method

2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)

275

527

pH

Not applicable.

Not applicable. insoluble in water.

Viscosity

Kinematic (40°C): >21 mm²/s

Solubility(ies)

Media

Result

cold water

Not soluble

Miscible with water

No.

Partition coefficient: n-octanol/ water

Not applicable.

Vapour pressure

Ingredient name

mm Hg

kPa

Method

butanone

78.7564

10.5

Vapour Pressure at 20°C

Vapour pressure at 50°C

Relative density

0.95

Vapour density

Highest known value: 3.7 (Air = 1) (benzyl alcohol). Weighted average: 3.34 (Air = 1)

Explosive properties

The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.

Oxidising properties

Product does not present an oxidizing hazard.

Particle characteristics

Median particle size

Not applicable.



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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 : The product is stable.
- 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.  
Refer to protective measures listed in sections 7 and 8.
- 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 : Depending on conditions, decomposition products may include the following  
materials: carbon oxides nitrogen oxides Formaldehyde. metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine)	LC50 Inhalation Dusts and mists	Rat	420 mg/m³	4 hours
	LD50 Dermal	Rabbit	>0.2 g/kg	-
benzyl alcohol	LD50 Oral	Rat	>0.32 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m³	4 hours
butanone	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1.23 g/kg	-
2,4,6-tris (dimethylaminomethyl) phenol	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
N-(3-(trimethoxysilyl)propyl) ethylenediamine	LD50 Dermal	Rabbit	1.28 g/kg	-
	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	2413 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMAGUARD CSF 650 HARDENER GREEN	633.2	415.6	N/A	N/A	0.65
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	500	300	N/A	N/A	0.5
benzyl alcohol	1230	N/A	N/A	N/A	1.5
butanone	2737	6480	N/A	N/A	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1200	1280	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	2413	N/A	N/A	N/A	N/A

Irritation/Corrosion

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**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,4,6-tris (dimethylaminomethyl)phenol	Skin - Visible necrosis	Rabbit	-	4 hours	7 days

- Conclusion/Summary** : Not available.
- Skin** : There are no data available on the mixture itself.
- Eyes** : There are no data available on the mixture itself.
- Respiratory** : There are no data available on the mixture itself.
- Sensitisation**
- Conclusion/Summary**
- Skin** : There are no data available on the mixture itself.
- Respiratory** : There are no data available on the mixture itself.
- Mutagenicity**
- Conclusion/Summary** : There are no data available on the mixture itself.
- Carcinogenicity**
- Conclusion/Summary** : There are no data available on the mixture itself.
- Reproductive toxicity**
- Conclusion/Summary** : There are no data available on the mixture itself.
- Teratogenicity**
- Conclusion/Summary** : There are no data available on the mixture itself.

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

Product/ingredient name	Category	Route of exposure	Target organs
butanone N-(3-(trimethoxysilyl)propyl)ethylenediamine	Category 3 Category 3	- -	Narcotic effects Respiratory tract irritation

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

Not available.

**Aspiration hazard**

Not available.

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

**Potential acute health effects**

- Eye contact** : Causes serious eye damage.
- Inhalation** : Toxic if inhaled.
- Skin contact** : Causes severe burns. Toxic in contact with skin. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

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

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.

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**SECTION 11: Toxicological information**

<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
<b>Ingestion</b>	: Adverse symptoms may include the following: stomach pains

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

<u>Short term exposure</u>	
<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.
<u>Long term exposure</u>	
<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.
<u>Potential chronic health effects</u>	
Not available.	
<b>Conclusion/Summary</b>	: Not available.
<b>General</b>	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: No known significant effects or critical hazards.
<b>Other information</b>	: Not available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
2,4,6-tris (dimethylaminomethyl) phenol	Acute LC50 175 mg/l	Fish	96 hours
N-(3-(trimethoxysilyl)propyl) ethylenediamine	EC50 597 mg/l	Fish	96 hours

<b>Conclusion/Summary</b>	: Not available.
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**12.2 Persistence and degradability**

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily

**12.3 Bioaccumulative potential**

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SECTION 12: Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	1.8	-	Low
benzyl alcohol	0.87	-	Low
butanone	0.3	-	Low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

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.

Waste catalogue

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.

Type of packaging	Waste catalogue
Container	15 01 06 mixed packaging

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

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SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN2922	UN2922	UN2922	UN2922
14.2 UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)  (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)  (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)  (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)  (2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine), 2,4,6-tris (dimethylaminomethyl) phenol)
14.3 Transport hazard class(es)	8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	Not applicable.	(2,2'-dimethyl-4,4'-methylenebis (cyclohexylamine))	Not applicable.

Additional information

ADR/RID	: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
ADN	: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
IMDG	: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
IATA	: The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 Special precautions for user	: <b>Transport within user's premises:</b> 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.
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14.7 Transport in bulk according to IMO instruments	: Not available.
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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
<u>UK (GB)/REACH</u>
<u>Annex XIV - List of substances subject to authorisation</u>
<u>Annex XIV</u>
None of the components are listed.
<u>Substances of very high concern</u>
None of the components are listed.

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SECTION 15: Regulatory information

Ozone depleting substances

Not listed.

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

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
H2
E2

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate  
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EUH statement = GB CLP-specific Hazard statement  
N/A = Not available  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number  
SGG = Segregation Group  
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Acute Tox. 4, H302	Calculation method
Acute Tox. 3, H311	Calculation method
Acute Tox. 3, H331	Calculation method
Skin Corr. 1A, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications



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**SECTION 16: Other information**

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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**Disclaimer**

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