COLOROBBIA

SAFETY DATA SHEET

COLOROBBIA ITALIA S.P.A.			**HTL--000032**				
Date of printing	:	22.10.2024	**Date of issue**	:	06.07.2024	**Issue/Revision**	: 5.0

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878 - Italy

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

1.1 Product identifier

Product name : HTL--000032
UFI : VUG3-30VV-700V-UEUF

Product code : 000000000010057889
Other means of identification : HTL--000032-H009

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

Identified uses : Third firing decoration in the glass/ceramics/porcelain sectorsThird firing decoration in the glass/ceramics/porcelain sectors

Uses advised against
Not applicable.

1.3 Details of the supplier of the safety data sheet

COLOROBBIA ITALIA S.P.A.
Indirizzo via Pietramarina 53
Località e Stato 50053 Sovigliana - Vinci (FI)
Italia
tel. +39 0571 7091
fax +39 0571 709.850

e-mail address of person responsible for this SDS : QHSE@colorobbia.it

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : +39 011 6637637 (Torino), +39 02 66101029 (Milano), +39 0382 24444; (Pavia). +39 049 8275078 (Padova), +390105636245 (Genova), +39055 4277238 (Firenze), +39 06 30.54343 (Roma), +39 06 49970698 (Roma), +39081 7472870 (Napoli)

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 Irrit. 2, H315
Skin Sens. 1, H317
STOT SE 3, H335 (Respiratory tract irritation)

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 : Warning
Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements

General : P103 - Read carefully and follow all instructions.P102 - Keep out of reach of children.P101 - If medical advice is needed, have product container or label at hand.

Prevention : P280 - Wear protective gloves. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.

Response : P304 - IF INHALED: P304 + P312 - Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 - IF ON SKIN: P302 + P352 - Wash with plenty of water. P333 - If skin irritation or rash occurs: P333 + P313 - Get medical advice or attention.

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

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : formaldehyde, reaction products with butylphenol
cyclohexanol
turpentine, oil
bornan-2-one
dodecane-1-thiol
linalool
N-(2-ethylhexyl)-1-[[3-methyl-4-[(3-

methylphenyl)azo]phenyl]azo]naphthalen-2-amine formaldehyde

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 : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
formaldehyde, reaction products with butylphenol	EC : 294-145-9 CAS : 91673-30-2 Index: 605-021-00-4	>= 25 - <= 50	Skin Sens. 1, H317	-	[1]
cyclohexanol	EC : 203-630-6 CAS : 108-93-0 Index: 603-009-00-3	>= 10 - <= 25	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 STOT SE 3, H335 (Respiratory tract irritation)	ATE [Oral] = 1.400 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1]
turpentine, oil	EC : 232-350-7 CAS : 8006-64-2 Index: 650-002-00-6	> 0 - < 1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1.100 mg/kg ATE [Inhalation (vapours)] = 13,7 mg/l	[1]

			Aquatic Chronic 2, H411		
bornan-2-one	EC : 200-945-0 CAS : 76-22-2	> 0 - < 1	Flam. Sol. 2, H228 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Chronic 4, H413	-	[1]
dodecane-1-thiol	EC : 203-984-1 CAS : 112-55-0	> 0 - <= 0,3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 (Respiratory tract irritation)	-	[1]
linalool	EC : 201-134-4 CAS : 78-70-6 Index: 603-235-00-2	> 0 - <= 0,3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317	-	[1]
N-(2-ethylhexyl)-1-[[3-methyl-4-[(3-methylphenyl)azo]phenyl]azo]naphthalen-2-amine	EC : 260-125-3 CAS : 56358-10-2	> 0 - <= 0,3	Skin Irrit. 2, H315 Skin Sens. 1, H317	-	[1]
formaldehyde	EC : 200-001-8 CAS : 50-00-0 Index: 605-001-00-5	> 0 - < 0,1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335 (Respiratory tract irritation)	ATE [Oral] = 100 mg/kg ATE [Dermal] = 270 mg/kg ATE [Inhalation (gases)] = 700 ppm Skin Corr. 1B, H314: >= 25 % Skin Irrit. 2, H315: 5 - < 25 % Eye Dam. 1, H318: >= 25 % Eye Irrit. 2, H319: 5 - < 25 % Skin Sens. 1, H317: >= 0,2 % STOT SE 3, H335: >= 5 %	[1] [2]

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer

		should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
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

Over-exposure signs/symptoms

Eye contact	:	Adverse symptoms may include the following: pain or irritation, watering, redness
Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation, coughing
Skin contact	:	Adverse symptoms may include the following: irritation, redness
Ingestion	:	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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.

Hazardous combustion products : Decomposition products may include the following materials: carbon dioxide, carbon monoxide Decomposition products may include the following materials: carbon dioxide, carbon monoxide

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. 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.

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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 spilled 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).

6.3 Methods and materials for containment and cleaning up

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

Large spill : Stop leak if without risk. Move containers from spill area. Approach 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 spilled 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. 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

Protective measures : 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 ingest. Avoid breathing vapor or mist. 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.

Advice on general occupational hygiene : 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 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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
formaldehyde	**EU OEL (2019-07-10). Skin sensitizer.** STEL 0,74 mg/m3 0,6 ppm TWA 0,5 mg/m3 0,62 ppm

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : 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

Product/ingredient name	Type	Exposure	Value	Population	Effects
cyclohexanol	DNEL	Long term Dermal	1,43 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0,716 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0,716 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	40,3 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	10 mg/m³	General population	Systemic
turpentine, oil	DNEL	Short term Dermal	1,6 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0,11 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	51,6 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	10,3 mg/m³	Workers	Local
	DNEL	Long term Inhalation	3,9 mg/m³	Workers	Local
	DNEL	Long term Dermal	3,17 mg/cm²	Workers	Local
	DNEL	Short term Oral	0,59 mg/kg bw/day	General population	Systemic
	DNEL	Short term	0,12 mg/m³	General	Systemic

		Inhalation		population	
	DNEL	Short term Dermal	9,51 mg/cm²	Workers	Local
	DNEL	Long term Inhalation	0,78 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	1,17 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0,018 mg/m³	General population	Systemic
	DNEL	Long term Dermal	0,417 mg/kg bw/day	General population	Systemic
bornan-2-one	DNEL	Long term Inhalation	4,3478 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	17,6316 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	10 mg/kg bw/day	Workers	Systemic
linalool	DNEL	Long term Dermal	3 mg/cm²	Workers	Local
formaldehyde	DNEL	Long term Inhalation	0,1 mg/m³	General population	Local
	DNEL	Long term Dermal	240 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	9 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	0,375 mg/m³	Workers	Local
	DNEL	Long term Oral	4,1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	3,2 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	0,75 mg/m³	Workers	Local

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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 : It is recommended to wear a hooded visor or protective visor combined with airtight goggles (ref. Standard EN 166).

Skin protection

Hand protection : Protect hands with category III work gloves (ref. Standard EN 374). For the final choice of the material of the work gloves it is necessary to consider: compatibility, degradation, breakage time and permeation. In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is not foreseeable. Gloves have a wear time that depends on the duration and method of use.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. In case of exceeding the threshold value (e.g. TLV-TWA) of the substance or of one or more of the substances present in the product, it is recommended to wear a mask with type AX filter whose limit of use will be defined by the manufacturer (ref. . standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided. The use of respiratory protection means is necessary in case the technical measures adopted are not sufficient to limit the exposure of the worker to the threshold values taken into consideration. The protection offered by the masks is however limited. In the event that the substance in question is odorless or its olfactory threshold is higher than the relative TLV-TWA and in the event of an emergency, wear an open-circuit compressed air breathing apparatus (ref. Standard EN 137) or a self-contained breathing apparatus. outdoor air (ref. EN 138 standard). For the correct choice of the respiratory protection device, refer to the EN 529 standard.

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

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 : liquid [liquid]
Color : Brown.
Odor : Aromatic.
Odor threshold : Not available.
Melting point/freezing point : < 10 °C (< 50 °F)
Initial boiling point and boiling range : > 100 °C (> 212 °F)

Flammability : Non-flammable.

Lower and upper explosion limit : **Lower:** 63 %(V)
Upper: 69 %(V)

Flash point : 66 °C (151 °F)

Auto-ignition temperature :

Ingredient name	Auto-ignition temperature
turpentine, oil	220 - 255 °C (428 - 491 °F)
linalool	235 °C (455 °F)
(R)-p-mentha-1,8-diene	237 °C (459 °F)
pin-2(3)-ene	255 °C (491 °F)
cyclohexanol	300 °C (572 °F) 285 °C (545 °F)
4-methylcyclohexanol, mixed isomers	295 °C (563 °F)
cineole	300 °C (572 °F)
propan-2-ol	398,89 °C (750,00 °F)
3-methoxybutyl acetate	410 °C (770 °F)
formaldehyde	430 °C (806 °F)
1-isopropyl-4-methylbenzene	435 °C (815 °F)
Aromatic hydrocarbons, C10	> 400 °C (> 752 °F)
ethanol	455 °C (851 °F) (DIN 51794)
bornan-2-one	466 °C (871 °F)

Decomposition temperature : Not available.

pH : Product is non-polar/aprotic.

Viscosity	:	**Dynamic :** Not available. **Kinematic :** 60 mm2/s @ 30 °C (86 °F)
Solubility in water	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable. The product is a mixture

Vapor pressure **:**

Ingredient name	Vapor pressure
formaldehyde	5.181 hPa (@ 25 °C) (77 °F) 1,2 hPa (@ 20 °C) (68 °F)
ethanol	57,26 hPa (@ 19,6 °C) (67,3 °F)
propan-2-ol	44 hPa (@ 20 °C) (68 °F)
4-methylpentan-2-one	21 hPa (@ 20 °C) (68 °F)
pin-2(3)-ene	8,51 hPa (@ 25 °C) (77 °F) (EU A.4) 6,9 hPa (@ 20 °C) (68 °F) (OECD 104)
(-)-pin-2(3)-ene	8,51 hPa (@ 25 °C) (77 °F) 6,9 hPa (@ 20 °C) (68 °F)
turpentine, oil	6,69 hPa (@ 25 °C) (77 °F) (EU A.4) 26 hPa (@ 25 °C) (77 °F) 5,19 hPa (@ 20 °C) (68 °F) (OECD 104)
pin-2(10)-ene	3,54 hPa (@ 25 °C) (77 °F) (EU A.4) 2,73 hPa (@ 20 °C) (68 °F) (OECD 104)
dodecane-1-thiol	3,3 hPa (@ 25 °C) (77 °F)
(R)-p-mentha-1,8-diene	2 hPa (@ 24,85 °C) (76,73 °F)
1-isopropyl-4-methylbenzene	2 hPa (@ 20 °C) (68 °F)
p-mentha-1,4(8)-diene	1,33 hPa (@ 25 °C) (77 °F) 1,01 hPa (@ 20 °C) (68 °F)
cyclohexanol	1,3 hPa (@ 20 °C) (68 °F) 1,33 hPa
cineole	1,22 hPa (@ 20 °C) (68 °F)
Aromatic hydrocarbons, C10	0,9 hPa (@ 20 °C) (68 °F)
bornan-2-one	0,87 hPa (@ 25 °C) (77 °F)
3-methoxybutyl acetate	5 hPa (@ 50 °C) (122 °F) (OECD 104) 0,34 hPa (@ 20 °C) (68 °F) (OECD 104) 0,58 hPa (@ 25 °C) (77 °F) (OECD 104)
linalool	0,27 hPa (@ 24,85 °C) (76,73 °F) (OECD 104)
1,3-diisopropylbenzene	0,0997 hPa (@ 20 °C) (68 °F)
eugenol	0,0399967 hPa (@ 25 °C) (77 °F)
p-menth-1-en-8-yl acetate	0,03515 hPa (@ 23 °C) (73 °F)

Relative density : 0,98

Density : 0,85 - 1,1 g/cm3
Vapor density : Not available.
Explosive properties : Not available.
Oxidizing properties : Not available.

Particle characteristics

Median particle size : Not applicable.

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 : No specific data.

10.5 Incompatible materials : No specific data.

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

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
cyclohexanol				
	LD50 Oral	Rat	1.400 mg/kg	-
turpentine, oil				
	LD50 Oral	Rat	3.956 mg/kg	-
	LC50 Inhalation Vapor	Rat	19,9 mg/l	1 h
	LC50 Inhalation Vapor	Rat	13,7 mg/l	4 h
linalool				
	LD50 Oral	Rat	2.790 mg/kg	-
	LD50 Dermal	Rabbit	5.610 mg/kg	-
	LD50 Dermal	Rat	5.610 mg/kg	-

formaldehyde				
	LD50 Oral	Rat	100 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-
	LC50 Inhalation Gas.	Rat	250 ppm	4 h
	LC50 Inhalation Gas.	Rat	250 ppm	4 h
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Dermal	Rabbit	270 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
HTL--000032-H009	5610,7 mg/kg	N/A	N/A	44,1 mg/l	N/A
cyclohexanol	1400 mg/kg	N/A	N/A	11 mg/l	N/A
turpentine, oil	500 mg/kg	1100 mg/kg	N/A	13,7 mg/l	N/A
linalool	2790 mg/kg	5610 mg/kg	N/A	N/A	N/A
formaldehyde	100 mg/kg	270 mg/kg	250 ppm	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
cyclohexanol	Skin - Moderate irritant	Rabbit	-	24 hrs	-
	Skin - Mild irritant	Rabbit	-	24 hrs	-
	Eyes - Moderate irritant	Rabbit	-	24 hrs	-
	Eyes - Mild irritant	Rabbit	-	24 hrs	-
	Eyes - Moderate irritant	Rabbit	-		-
turpentine, oil	Skin - Severe irritant	Rabbit	-		-
	Skin - Severe irritant	Human	-		-
linalool	Eyes - Moderate irritant	Rabbit	-	1 hrs	-
	Skin - Mild irritant	Man	-	48 hrs	-
	Skin - Mild	Rabbit	-	24 hrs	-

	irritant				
	Skin - Severe irritant	Rabbit	-	24 hrs	-
	Eyes - Moderate irritant	Rabbit	-		-
	Skin - Moderate irritant	Guinea pig	-	24 hrs	-
	Skin - Mild irritant	Human	-	72 hrs	-
formaldehyde	Eyes - Severe irritant	Rabbit	-		-
	Skin - Severe irritant	Human	-		-
	Skin - Mild irritant	Human	-	72 hrs	-
	Eyes - Mild irritant	Human	-	0,1 hrs	-
	Skin - Severe irritant	Rabbit	-	24 hrs	-
	Skin - Mild irritant	Rabbit	-		-
	Skin - Moderate irritant	Rabbit	-	24 hrs	-
	Eyes - Severe irritant	Rabbit	-	24 hrs	-
	Eyes - Severe irritant	Rabbit	-		-
	Eyes - Severe irritant	Rabbit	-		-
	Skin - Severe irritant	Rabbit	-		-

Conclusion/Summary

Skin : Not available.
Eyes : Not available.
Respiratory : Not available.

Sensitization

Conclusion/Summary

Skin : Not available.
Respiratory : Not available.

Mutagenicity

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
cyclohexanol	Category 3	-	Respiratory tract irritation
dodecane-1-thiol	Category 3	-	Respiratory tract irritation
formaldehyde	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
bornan-2-one	Category 1	-	-

Aspiration hazard

Product/ingredient name	Result
turpentine, oil	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : May cause respiratory irritation.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following: pain or irritation, watering, redness
Inhalation : Adverse symptoms may include the following: respiratory tract irritation, coughing
Skin contact : Adverse symptoms may include the following: irritation, redness
Ingestion : No specific data.

Delayed and immediate effects and also 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

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.
Reproductive toxicity : No known significant effects or critical hazards.

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties : Not available.
11.2.2 Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
cyclohexanol			
	Acute LC50 704 mg/l Fresh water	Fish - Pimephales promelas	96 h
linalool			
	Acute LC50 28,8 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 h
	Acute EC50 36,7 mg/l Fresh water	Daphnia - Daphnia magna	48 h
formaldehyde			
	Acute LC50 1,41 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 h
	Acute LC50 1,41 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 h
	Acute EC50 3,26 mg/l Fresh water	Daphnia - Daphnia magna	48 h
	Acute LC50 11,41 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 h
	Acute EC50 3,26 mg/l Fresh water	Daphnia - Daphnia magna	48 h
	Acute LC50 11,41 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 h
	Acute EC50 3,48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 h
	Acute EC50 3,48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 h
	Acute EC50 0,442 mg/l Marine water	Algae - Ulva pertusa	96 h
	Acute EC50 0,442 mg/l Marine	Algae - Ulva pertusa	96 h

	water		
	Chronic NOEC 0,005 mg/l Marine water	Algae - Isochrysis galbana	96 h
	Chronic NOEC 0,005 mg/l Marine water	Algae - Isochrysis galbana	96 h
	Chronic NOEC 1,56 mg/l Fresh water	Fish - Oreochromis niloticus	84 d
	Chronic NOEC 1,56 mg/l Fresh water	Fish - Oreochromis niloticus	84 d
	Chronic NOEC 3.000 mg/l Fresh water	Crustaceans - Astacus astacus	21 d
	Chronic NOEC 3.000 mg/l Fresh water	Crustaceans - Astacus astacus	21 d

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
cyclohexanol	1,21,25	-	low
bornan-2-one	2,38	-	low
dodecane-1-thiol	6,5	-	high
linalool	2,84	-	low
formaldehyde	0,35	-	lowlow

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : 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 Endocrine disrupting properties : Not available.

12.7 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 minimized 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 : The classification of the product may meet the criteria for a hazardous waste.

Packaging

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

Type of packaging	European waste catalogue (EWC)	
	15 01 10*	packaging containing residues of or contaminated by hazardous substances

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	-	-	-
14.2 UN proper shipping name	Not regulated.	Not regulated.	Not regulated.
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5. Environmental hazards	No.	No.	No.

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

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.

14.7 Transport in bulk according to IMO instruments : Not available.

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 authorization

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

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

None of the components are listed.

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

None of the components are listed.

Persistent Organic Pollutants

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

D.Lgs. 152/06 : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Chemical Weapons Convention List Schedule I Chemicals

None of the components are listed.

Chemical Weapons Convention List Schedule II Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule III Chemicals
None of the components are listed.

Montreal Protocol
None of the components are listed.

Stockholm Convention on Persistent Organic Pollutants

Annex A - Elimination - Production
None of the components are listed.

Annex A - Elimination - Use
None of the components are listed.

Annex B - Restriction - Production
None of the components are listed.

Annex B - Restriction - Use
None of the components are listed.

Annex C - Unintentional - Production
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Rotterdam Convention on Prior Informed Consent (PIC) - Industrial
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) - Pesticide
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) -Severely hazardous pesticide
None of the components are listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Heavy metals - Annex 1
None of the components are listed.

POPs - Annex 1 - Production
None of the components are listed.

POPs - Annex 1 - Use
None of the components are listed.

POPs - Annex 2
None of the components are listed.

POPs - Annex 3

None of the components are listed.

Inventory list

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Eurasian Economic Union	:	**Russian Federation inventory:** Not determined.
Japan	:	**Japan inventory (CSCL)**: Not determined. **Japan inventory (ISHL)**: Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	At least one component is inactive.
Viet Nam	:	Not determined.

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

SECTION 16: Other information

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

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335 (Respiratory tract irritation)	Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapor.
H228	Flammable solid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 4	AQUATIC HAZARD (LONG-TERM) - Category 4
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Flam. Sol. 2	FLAMMABLE SOLIDS - Category 2
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Resp. Sens. 1	RESPIRATORY SENSITIZATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

Date of printing : 22.10.2024
Date of issue/ Date of revision : 06.07.2024
Date of previous issue : 13.06.2023
Version : 5.0

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Notwithstanding the above, the provisions of this clause shall not apply in the event of

supplier wilful misconduct (dolo), in which case the provisions of current legislation shall apply.