

SAFETY DATA SHEET

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|-----------------------------|--------------|--------------------|--------------|
| COLOROBbia ITALIA S.P.A. | | HTL--000136 | |
| Date of printing | : 17.07.2023 | Date of issue | : 29.06.2023 |
| | | Issue/Revision | : 4.0 |

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

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

1.1 Product identifier

Product name : HTL--000136
Product code : 000000000010057931
Product description : Not available.
Product type : liquid
Other means of identification : HTL--000136

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

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

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 : CAV - Ospedale Pediatrico Bambino Gesù - Roma - tel. +39 06 68593726
Az. Ospedaliera Università Foggia - Foggia - tel. 800183459
Az. Ospedaliera - A. Cardarelli- Napoli- tel. +39 081 7472870
CAV - Policlinico Umberto I- Roma - tel. +39 06 49978000
CAV - Policlinico A. Gemelli - Roma - tel. +39 06 3054343
Az. Ospedaliera Careggi - U.O. Tossicologia Medica - Firenze - tel. +39 055 7947819
CAV - Centro Nazionale di Informazione Tossicologica - Pavia - tel.

+39 0382 24444
Ospedale Niguarda Ca' Granda - Milano - tel. +39 02 66101029
Az. ospedaliera Papa Giovanni XXIII - Bergamo - tel. 800883300

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
Skin Irrit. 2, H315
Eye Dam. 1, H318
Skin Sens. 1, H317
STOT RE 2, H373
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

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

Hazard statements : H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

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. P280 - Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P260 - Do not breathe vapor. P264 - Wash thoroughly after handling.

Response : P391 - Collect spillage. P314 - Get medical advice or attention 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. P305 - IF IN EYES: P305 + P351 + P338 - Rinse cautiously with water for several minutes. Remove

- Storage** : contact lenses, if present and easy to do. Continue rinsing. P305 + P310 - Immediately call a POISON CENTER or doctor.
- Disposal** : Not applicable.
 : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : turpentine, oil
 rosin
 Eucalyptus globulus, ext.
 bornan-2-one
 (E)-anethole
 linalool
 (R)-p-mentha-1,8-diene
 anethole
 cineole
 pin-2(3)-ene
 pin-2(10)-ene
 p-mentha-1,4(8)-diene
 Melaleuca alternifolia, ext.
- 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** : Yes, 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 |
|-------------------------|--|---------------|--|--|------|
| turpentine, oil | EC : 232-350-7 CAS : 8006-64-2 Index: 650-002-00-6 | >= 10 - <= 20 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 | ATE [Oral] = 500 mg/kg ATE [Dermal] = 1.100 mg/kg ATE [Inhalation (vapours)] = 13,7 mg/l | [1] |

Version: 4.0

Date of issue/Date of revision: 29.06.2023

Date of previous issue: 15.06.2023

| | | | | | |
|---------------------------|--|--------------|---|--|---------|
| | | | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 | | |
| rosin | EC : 232-475-7 CAS : 8050-09-7 Index: 650-015-00-7 | > 0 - <= 10 | Met. Corr. 1, H290 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 100 M [Chronic] = 10 | [1] |
| Eucalyptus globulus, ext. | EC : 283-406-2 CAS : 84625-32-1 | > 0 - <= 10 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | - | [1] |
| cyclohexanol | EC : 203-630-6 CAS : 108-93-0 Index: 603-009-00-3 | > 0 - <= 7 | 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] |
| benzyl alcohol | EC : 202-859-9 CAS : 100-51-6 Index: 603-057-00-5 | > 0 - <= 4,1 | Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319 | ATE [Oral] = 1.230 mg/kg ATE [Inhalation (vapours)] = 11 mg/l | [1] |
| bornan-2-one | EC : 200-945-0 CAS : 76-22-2 | > 0 - <= 3 | Flam. Sol. 2, H228 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Chronic 4, H413 | - | [1] |
| cyclohexanone | EC : 203-631-1 CAS : 108-94-1 Index: 606-010-00-7 | > 0 - <= 3 | Flam. Liq. 3, H226 Acute Tox. 4, H332 | ATE [Inhalation (gases)] = 8.000 ppm | [1] [2] |
| (E)-anethole | EC : 224-052-0 CAS : 4180-23-8 | > 0 - <= 3 | Skin Sens. 1, H317 | - | [1] |
| linalool | EC : 201-134-4 CAS : 78-70-6 Index: 603-235-00-2 | > 0 - <= 3 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 | - | [1] |
| (R)-p-mentha-1,8-diene | EC : 227-813-5 CAS : 5989-27-5 Index: 601-096-00-2 | > 0 - <= 3 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412 | M [Acute] = 1 | [1] |
| anethole | EC : 203-205-5 CAS : 104-46-1 | > 0 - < 1 | Skin Sens. 1, H317 | - | [1] |

| | | | | | |
|---------------------------------|------------------------------------|--------------|---|----------------------------------|-----|
| cineole | EC : 207-431-5 CAS : 470-82-6 | > 0 - < 1 | Flam. Liq. 3, H226 Skin Sens. 1, H317 | - | [1] |
| pin-2(3)-ene | EC : 201-291-9 CAS : 80-56-8 | > 0 - < 1 | Flam. Liq. 3, H226 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| camphene | EC : 201-234-8 CAS : 79-92-5 | > 0 - <= 0,3 | Flam. Sol. 2, H228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| pin-2(10)-ene | EC : 204-872-5 CAS : 127-91-3 | > 0 - <= 0,3 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 | - | [1] |
| p-mentha-1,4(8)-diene | EC : 209-578-0 CAS : 586-62-9 | > 0 - <= 0,3 | Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| Melaleuca alternifolia, ext. | EC : 285-377-1 CAS : 85085-48-9 | > 0 - <= 0,3 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 | ATE [Oral] = 500 mg/kg | [1] |

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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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, watering, redness
- Inhalation** : No specific data.
- 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** : 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 dry chemical, CO₂, water spray (fog) or foam.
- 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 vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very 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 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. 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.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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 breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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 a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

Seveso Directive - Reporting thresholds

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| P5c | 5.000 t | 50.000 t |

| | | |
|----|-------|-------|
| E1 | 100 t | 200 t |
|----|-------|-------|

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 |
|-------------------------|--|
| cyclohexanone | EU OEL (2000-06-01). Absorbed through skin.. TWA 40,8 mg/m ³ 10 ppm STEL 81,6 mg/m ³ 20 ppm Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (2004-03-01). Absorbed through skin.. TWA 40,8 mg/m ³ 10 ppm STEL 81,6 mg/m ³ 20 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 |
|-------------------------|------|--------------------------|------------------------|-----------------------|----------|
| 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/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 10,3 mg/m ³ | Workers | Local |

| | | | | | |
|---------------------------|------|--------------------------|-------------------------|-----------------------|----------|
| | DNEL | Long term Inhalation | 3,9 mg/m ³ | Workers | Local |
| | DNEL | Long term Dermal | 3,17 mg/cm ² | Workers | Local |
| | DNEL | Short term Oral | 0,59 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Inhalation | 0,12 mg/m ³ | General population | Systemic |
| | DNEL | Short term Dermal | 9,51 mg/cm ² | Workers | Local |
| | DNEL | Long term Inhalation | 0,78 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 1,17 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 0,018 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 0,417 mg/kg bw/day | General population | Systemic |
| 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/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 10 mg/m ³ | General population | Systemic |
| rosin | DNEL | Long term Oral | 1,0655 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 10 mg/m ³ | Workers | Local |
| | DNEL | Long term Dermal | 2,131 mg/kg bw/day | Workers | Systemic |
| Eucalyptus globulus, ext. | DNEL | Long term Inhalation | 3,52 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 0,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 0,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 0,87 mg/m ³ | General population | Systemic |
| benzyl alcohol | DNEL | Short term Inhalation | 110 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Dermal | 40 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 27 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 8 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 5,4 mg/m ³ | General population | Systemic |
| | DNEL | Long term Oral | 4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term | 22 mg/m ³ | Workers | Systemic |

| | | | | | |
|---------------|------|--------------------------|------------------------------|-----------------------|----------|
| | | Inhalation | | | |
| | DNEL | Short term Dermal | 20 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 20 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | General population | Systemic |
| bornan-2-one | DNEL | Long term Inhalation | 4,3478 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 17,6316 mg/m ³ | 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 |
| cyclohexanone | DNEL | Short term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Inhalation | 80 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 80 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 40 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 40 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 40 mg/m ³ | General population | Local |
| | DNEL | Short term Inhalation | 20 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 20 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 10 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Dermal | 4 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Oral | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Inhalation | 20 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 20 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 10 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Dermal | 4 mg/kg bw/day | Workers | Systemic |

| | | | | | |
|------------------------|------|-----------------------|--------------------------|--------------------|----------|
| | DNEL | Long term Oral | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic |
| (E)-anethole | DNEL | Long term Dermal | 3 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 1,5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 2,61 mg/m ³ | General population | Systemic |
| linalool | DNEL | Long term Dermal | 3 mg/cm ² | Workers | Local |
| (R)-p-mentha-1,8-diene | DNEL | Long term Inhalation | 16,6 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 9,5 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 4,8 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 4,8 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 66,7 mg/m ³ | Workers | Systemic |
| cineole | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 600 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 7,05 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 2 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 1,74 mg/m ³ | General population | Systemic |
| pin-2(3)-ene | DNEL | Long term Dermal | 0,225 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 0,225 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 3,8 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 0,674 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 0,542 mg/kg bw/day | Workers | Systemic |
| camphene | DNEL | Long term Inhalation | 110,19 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 110,19 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 54,3 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 54,3 mg/m ³ | General population | Systemic |
| | DNEL | Short term Dermal | 1,25 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term | 0,625 mg/kg | General | Systemic |

| | | | | | |
|------------------------------|------|-----------------------|-------------------------|--------------------|----------|
| | | Dermal | bw/day | population | |
| | DNEL | Short term Oral | 0,625 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0,1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 0,1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0,21 mg/kg bw/day | Workers | Systemic |
| p-mentha-1,4(8)-diene | DNEL | Long term Inhalation | 3,6 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 0,9 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 0,52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 0,26 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 0,26 mg/kg bw/day | General population | Systemic |
| Melaleuca alternifolia, ext. | DNEL | Long term Oral | 0,067 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 0,067 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4,356 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Dermal | 4,356 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 1,556 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 1,556 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 0,658 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 0,658 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 0,296 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 0,296 mg/m ³ | General population | Systemic |

PNECs

No PNECs available.

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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. 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** : 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 | : Not available. |
| Initial boiling point and boiling range | : > 100 °C (> 212 °F) |
| Flammability | : Not available. |
| Lower and upper explosion limit | : Lower: Not available. Upper: Not available. |
| Flash point | : |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| pH | : Product is non-polar/aprotic. |
| Viscosity | : Dynamic : Not available. Kinematic : Not available. |
| Solubility in water | : insoluble |
| Partition coefficient: n-octanol/water | : Not applicable. |
| Vapor pressure | : |
| Relative density | : Not available. |
| Vapor density | : Not applicable. |
| 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 | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers |

to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

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 |
|-------------------------|-----------------------|---------|-------------|----------|
| 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 |
| cyclohexanol | | | | |
| | LD50 Oral | Rat | 1.400 mg/kg | - |
| rosin | | | | |
| | LD50 Oral | Rat | 7.600 mg/kg | - |
| benzyl alcohol | | | | |
| | LD50 Oral | Rat | 1.230 mg/kg | - |
| | LD50 Dermal | Rabbit | 2.000 mg/kg | - |
| cyclohexanone | | | | |
| | LD50 Oral | Rat | 1.800 mg/kg | - |
| | LC50 Inhalation Gas. | Rat | 8.000 ppm | 4 h |
| (E)-anethole | | | | |
| | LD50 Oral | Rat | 2.090 mg/kg | - |
| linalool | | | | |
| | LD50 Oral | Rat | 2.790 mg/kg | - |
| | LD50 Dermal | Rabbit | 5.610 mg/kg | - |
| | LD50 Dermal | Rat | 5.610 mg/kg | - |
| (R)-p-mentha-1,8-diene | | | | |
| | LD50 Oral | Rat | 4.400 mg/kg | - |
| | LD50 Dermal | Rabbit | 5.000 mg/kg | - |
| anethole | | | | |
| | LD50 Oral | Rat | 2.090 mg/kg | - |
| | LD50 Dermal | Rabbit | 5.000 mg/kg | - |
| cineole | | | | |
| | LD50 Oral | Rat | 2.480 mg/kg | - |
| pin-2(3)-ene | | | | |
| | LD50 Oral | Rat | 3.700 mg/kg | - |
| | LD50 Dermal | Rabbit | 5.000 mg/kg | - |
| camphene | | | | |
| | LD50 Oral | Rat | 5.000 mg/kg | - |
| | LC50 Inhalation Vapor | Rat | 17,1 mg/l | 1 h |
| | LC50 Inhalation Vapor | Rat | 17,1 mg/l | 4 h |

| | | | | |
|-----------------------|-------------|--------|-------------|---|
| pin-2(10)-ene | | | | |
| | LD50 Oral | Rat | 4.700 mg/kg | - |
| | LD50 Dermal | Rabbit | 5.000 mg/kg | - |
| p-mentha-1,4(8)-diene | | | | |
| | LD50 Oral | Rat | 4.390 mg/kg | - |

Conclusion/Summary : Not available.

Acute toxicity estimates

| Product/ingredient name | Oral | Dermal | Inhalation (gases) | Inhalation (vapors) | Inhalation (dusts and mists) |
|------------------------------|--------------|--------------|--------------------|---------------------|------------------------------|
| HTL--000136 | 2286,7 mg/kg | 6040,6 mg/kg | 458347,7 ppm | 45,2 mg/l | N/A |
| turpentine, oil | 500 mg/kg | 1100 mg/kg | N/A | 13,7 mg/l | N/A |
| cyclohexanol | 1400 mg/kg | N/A | N/A | 11 mg/l | N/A |
| rosin | 7600 mg/kg | N/A | N/A | N/A | N/A |
| benzyl alcohol | 1230 mg/kg | N/A | N/A | 11 mg/l | N/A |
| cyclohexanone | N/A | N/A | 8000 ppm | N/A | N/A |
| (E)-anethole | 2090 mg/kg | N/A | N/A | N/A | N/A |
| linalool | 2790 mg/kg | 5610 mg/kg | N/A | N/A | N/A |
| (R)-p-mentha-1,8-diene | 4400 mg/kg | 5000 mg/kg | N/A | N/A | N/A |
| anethole | 2090 mg/kg | 5000 mg/kg | N/A | N/A | N/A |
| cineole | 2480 mg/kg | N/A | N/A | N/A | N/A |
| pin-2(3)-ene | 3700 mg/kg | 5000 mg/kg | N/A | N/A | N/A |
| camphene | 5000 mg/kg | N/A | N/A | N/A | N/A |
| pin-2(10)-ene | 4700 mg/kg | 5000 mg/kg | N/A | N/A | N/A |
| p-mentha-1,4(8)-diene | 4390 mg/kg | N/A | N/A | N/A | N/A |
| Melaleuca alternifolia, ext. | 500 mg/kg | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|----------|-------------|
| turpentine, oil | Skin - Severe irritant | Rabbit | - | | - |
| | Skin - Severe irritant | Human | - | | - |
| 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 - | Rabbit | - | | - |

| | | | | | |
|------------------------|--------------------------|------------|---|--------|---|
| | Moderate irritant | | | | |
| benzyl alcohol | Skin - Moderate irritant | Pig | - | | - |
| | Skin - Mild irritant | Man | - | 48 hrs | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hrs | - |
| cyclohexanone | Eyes - Severe irritant | Rabbit | - | 24 hrs | - |
| | Skin - Mild irritant | Human | - | 48 hrs | - |
| | Skin - Mild irritant | Rabbit | - | | - |
| | Eyes - Severe irritant | Rabbit | - | | - |
| linalool | Eyes - Moderate irritant | Rabbit | - | 1 hrs | - |
| | Skin - Mild irritant | Man | - | 48 hrs | - |
| | Skin - Mild irritant | Rabbit | - | 24 hrs | - |
| | Skin - Severe irritant | Rabbit | - | 24 hrs | - |
| | Eyes - Moderate irritant | Rabbit | - | | - |
| | Skin - Moderate irritant | Guinea pig | - | 24 hrs | - |
| | Skin - Mild irritant | Human | - | 72 hrs | - |
| (R)-p-mentha-1,8-diene | Skin - Mild irritant | Rabbit | - | 24 hrs | - |
| pin-2(3)-ene | Skin - Moderate irritant | Rabbit | - | 24 hrs | - |
| | Skin - Severe irritant | Man | - | | - |
| pin-2(10)-ene | Skin - Moderate irritant | Rabbit | - | 24 hrs | - |
| p-mentha-1,4(8)-diene | Skin - Moderate irritant | Rabbit | - | 24 hrs | - |

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 |

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 |
| (R)-p-mentha-1,8-diene | ASPIRATION HAZARD - Category 1 |
| pin-2(3)-ene | ASPIRATION HAZARD - Category 1 |
| pin-2(10)-ene | ASPIRATION HAZARD - Category 1 |
| p-mentha-1,4(8)-diene | ASPIRATION HAZARD - Category 1 |
| Melaleuca alternifolia, ext. | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
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, watering, redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following: pain or irritation, redness, blistering may occur

Ingestion : Adverse symptoms may include the following: stomach pains

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 : May cause damage to organs through prolonged or repeated exposure. 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 |
| benzyl alcohol | | | |
| | Acute LC50 10 mg/l Fresh water | Fish - Lepomis macrochirus | 96 h |
| cyclohexanone | | | |
| | Acute LC50 527 mg/l Fresh water | Fish - Pimephales promelas | 96 h |
| | Acute EC50 32,9 mg/l | Algae - Chlamydomonas reinhardtii | 72 h |
| | Chronic EC10 3,56 mg/l | Algae - Chlamydomonas reinhardtii | 72 h |
| (E)-anethole | | | |
| | Acute EC50 4,81 mg/l Fresh water | Fish - Pimephales promelas | 96 h |
| | Acute EC50 4,25 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| | Acute IC50 9,313 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 h |
| linalool | | | |
| | Acute LC50 28,8 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 h |

| | | | |
|-------------------------------|---|---|------|
| | water | | |
| | Acute EC50 36,7 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| (R)-p-mentha-1,8-diene | | | |
| | Acute EC50 0,688 mg/l Fresh water | Fish - Pimephales promelas | 96 h |
| | Acute EC50 0,421 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| cineole | | | |
| | Acute LC50 102 mg/l Fresh water | Fish - Pimephales promelas | 96 h |
| pin-2(3)-ene | | | |
| | Acute LC50 5,28 mg/l Fresh water | Fish - Lepomis macrochirus | 96 h |
| | Acute LC50 41 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| camphene | | | |
| | Acute LC50 1,17 mg/l Fresh water | Fish - Lepomis macrochirus | 96 h |
| | Acute LC50 22 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| | Acute EC50 214 mg/l Marine water | Algae - Skeletonema costatum | 96 h |
| pin-2(10)-ene | | | |
| | Chronic NOEC 0,058 mg/l Fresh water | Fish - Oncorhynchus mykiss | 60 d |
| p-mentha-1,4(8)-diene | | | |
| | Acute EC50 0,763 mg/l Fresh water | Fish - Pimephales promelas | 96 h |
| | Acute EC50 1,38 mg/l Fresh water | Daphnia - Daphnia magna | 48 h |
| | Chronic NOEC 0,03 - 0,95 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 h |

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 |
| rosin | 1,9 - 7,7 | - | high |
| benzyl alcohol | 1 | - | low |
| bornan-2-one | 2,38 | - | low |
| cyclohexanone | 0,86 | - | low |
| linalool | 2,84 | - | low |
| (R)-p-mentha-1,8-diene | 4,57 | - | high |
| cineole | 2,74 | - | low |
| pin-2(3)-ene | 4,487 | - | high |
| camphene | - | 954,99 | high |
| pin-2(10)-ene | 4,425 | - | high |
| p-mentha-1,4(8)-diene | 4,47 | - | high |

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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|--|--|--|--|
| 14.1 UN number | UN1993 | UN1993 | UN1993 |
| 14.2 UN proper shipping name | FLAMMABLE LIQUID, N.O.S. (turpentine, oil, decahydronaphthalene) | FLAMMABLE LIQUID, N.O.S. (turpentine, oil, decahydronaphthalene) | Flammable liquid, n.o.s. (turpentine, oil, decahydronaphthalene) |
| 14.3 Transport hazard class(es) | 3 | 3 | 3 |
| 14.4 Packing group | III | III | III |
| 14.5. Environmental hazards | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

Additional information

| | |
|----------------|--|
| ADR/RID | : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Special provisions</u> 274, 601 <u>Tunnel code</u> (E) |
| 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. <u>Special provisions</u> 223, 274, 955 |
| IATA | : The environmentally hazardous substance mark may appear if required by other transportation regulations. <u>Special provisions</u> A3 |

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 : Not applicable.

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the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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 controlled under the Seveso Directive.

Danger criteria

| Category |
|----------|
| P5c |
| E1 |

National regulations

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

Version: 4.0

Date of issue/Date of revision: 29.06.2023

Date of previous issue: 15.06.2023

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 | : | All components are listed or exempted. |

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 |
|-------------------------|-----------------------|
| Flam. Liq. 3, H226 | On basis of test data |
| Skin Irrit. 2, H315 | Calculation method |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| STOT RE 2, H373 | Calculation method |
| Aquatic Acute 1, H400 | Calculation method |
| Aquatic Chronic 1, H410 | Calculation method |

Full text of abbreviated H statements

| | |
|------|--|
| H226 | Flammable liquid and vapor. |
| H228 | Flammable solid. |
| H290 | May be corrosive to metals. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| H413 | May cause long lasting harmful effects to aquatic life. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | AQUATIC HAZARD (ACUTE) - Category 1 |
| Aquatic Chronic 1 | AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Aquatic Chronic 2 | AQUATIC HAZARD (LONG-TERM) - Category 2 |

| | |
|-------------------|---|
| Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Aquatic Chronic 4 | AQUATIC HAZARD (LONG-TERM) - Category 4 |
| Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| 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 |
| Met. Corr. 1 | CORROSIVE TO METALS - Category 1 |
| 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 RE 2 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3 |

Date of printing : 17.07.2023
Date of issue/ Date of revision : 29.06.2023
Date of previous issue : 15.06.2023
Version : 4.0

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