

SAFETY DATA SHEET



TEKNODUR COMBI 3560-19 - All variants

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

1.1 Product identifier

Product name : TEKNODUR COMBI 3560-19 - All variants

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

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person responsible for this SDS : Prod-safe@teknos.com

National contact

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Centre: 01 809 2566

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 Corr. 1C, H314

Eye Dam. 1, H318

Skin Sens. 1, H317

Aquatic Chronic 2, H411

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 vapour.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves, protective clothing and 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.

SECTION 2: Hazards identification

| | |
|---|--|
| Response | : P391 - Collect spillage. P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. |
| Storage | : Not applicable. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane EO bis(benzotriazolyl)phenylpropionat |
| Supplemental label elements | : Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : |

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 |
|---|--|-----------|---|---|---------|
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | REACH #: 01-0000017556-64 EC: 429-270-1 CAS: 136210-30-5 Index: 607-521-00-8 | ≥10 - ≤25 | Skin Sens. 1, H317 Aquatic Chronic 3, H412 | - | [1] |
| Trizinc bis(orthophosphate) | REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6 | ≤10 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine | REACH #: 01-2119978283-28 EC: 259-393-4 CAS: 54914-37-3 | ≤10 | Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 | - | [1] |
| bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane | REACH #: 01-0000015937-58 EC: 412-060-9 CAS: 136210-32-7 Index: 607-350-00-9 | ≤10 | Skin Sens. 1, H317 Aquatic Chronic 3, H412 | - | [1] |
| Xylene | REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 | ≤3 | Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 | ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l | [1] [2] |

Date of issue/Date of revision : 28/10/2022 Date of previous issue : No previous validation Version : 1 2/18

TEKNODUR COMBI 3560-19 - All variants

Label No : 36351

SECTION 3: Composition/information on ingredients

| | | | | | |
|---|--|------|---|---|-----|
| EO bis(benztriazolyl) phenylpropionat | REACH #: 01-0000015075-76 EC: 400-830-7 CAS: 104810-48-2 Index: 607-176-00-3 | <1 | STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304 Skin Sens. 1A, H317 Aquatic Chronic 2, H411 | - | [1] |
| Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | REACH #: 01-2119491304-40 | ≤1 | Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| Zinc oxide | REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7 | ≤0.3 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| Quaternary ammonium compounds, coco alkylethyldimethyl, Et sulfates | REACH #: 01-2119977130-42 EC: 269-662-8 CAS: 68308-64-5 | <0.1 | Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above. | ATE [Oral] = 500 mg/kg ATE [Dermal] = 300 mg/kg M [Acute] = 10 M [Chronic] = 1 | [1] |

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

Contains: > 1 % TiO₂

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

SECTION 4: First aid measures

- 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** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use 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 vapour. 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 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.

SECTION 5: Firefighting measures

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
metal oxide/oxides

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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

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

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. 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 vapour 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. Eliminate all ignition sources. Separate from oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|-----------|---------------------------------|--------------------------|
| P5c E2 | 5000 tonne 200 tonne | 50000 tonne 500 tonne |

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 |
|-------------------------|---|
| Xylene | NAOSH (Ireland, 5/2021). [xylene] Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 50 ppm 8 hours. OELV-8hr: 221 mg/m ³ 8 hours. OELV-15min: 100 ppm 15 minutes. OELV-15min: 442 mg/m ³ 15 minutes. |

SECTION 8: Exposure controls/personal protection

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

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|------|-----------------------|------------------------|--------------------|----------|
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | DNEL | Short term Oral | 1.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 1.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 1.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 4.8 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 4.8 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 28 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 112 mg/m ³ | Workers | Systemic |
| Trizinc bis(orthophosphate) | DNEL | Long term Oral | 0.83 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 2.5 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 5 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | Workers | Systemic |
| 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine | DNEL | Long term Oral | 0.526 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 150 mg/m ³ | Workers | Systemic |
| bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane | DNEL | Short term Oral | 4.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 4.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 4.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 11.9 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 14.5 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 14.5 mg/m ³ | General | Systemic |

SECTION 8: Exposure controls/personal protection

| | | | | | |
|--|------------|------------------------------|-------------------------|-----------------------|----------|
| Xylene | DNEL | Inhalation Long term | 84 mg/m ³ | population Workers | Systemic |
| | DNEL | Inhalation Short term | 672 mg/m ³ | Workers | Systemic |
| | DNEL | Inhalation Long term Oral | 1.6 mg/kg bw/day | General population | Systemic |
| | DNEL | Inhalation Long term | 14.8 mg/m ³ | General population | Systemic |
| | DNEL | Inhalation Long term | 77 mg/m ³ | Workers | Systemic |
| | DNEL | Dermal Long term | 108 mg/kg bw/day | General population | Systemic |
| | DNEL | Dermal Long term | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Inhalation Short term | 289 mg/m ³ | Workers | Local |
| | DNEL | Inhalation Short term | 289 mg/m ³ | Workers | Systemic |
| | DNEL | Inhalation Long term | 65.3 mg/m ³ | General population | Local |
| | DNEL | Inhalation Short term | 260 mg/m ³ | General population | Local |
| | DNEL | Inhalation Short term | 260 mg/m ³ | General population | Systemic |
| | DNEL | Inhalation Long term | 221 mg/m ³ | Workers | Local |
| | Zinc oxide | DNEL | Inhalation Long term | 0.5 mg/m ³ | Workers |
| DNEL | | Inhalation Long term Oral | 0.83 mg/ kg bw/day | General population | Systemic |
| DNEL | | Inhalation Long term | 2.5 mg/m ³ | General population | Systemic |
| DNEL | | Inhalation Long term | 5 mg/m ³ | Workers | Systemic |
| DNEL | | Dermal Long term | 83 mg/kg bw/day | General population | Systemic |
| DNEL | | Dermal Long term | 83 mg/kg bw/day | Workers | Systemic |
| DNEL | | Dermal Long term | 4.7 mg/kg bw/day | Workers | Local |
| DNEL | | Inhalation Long term | 3.32 mg/m ³ | Workers | Local |
| Quaternary ammonium compounds, coco alkylethyldimethyl, Et sulfates | DNEL | Dermal Long term | 4.7 mg/kg bw/day | Workers | Local |
| | DNEL | Inhalation Long term | 3.32 mg/m ³ | Workers | Local |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|------------------------|----------------|---------------|
| Quaternary ammonium compounds, coco alkylethyldimethyl, Et sulfates | Fresh water | 0.00068 mg/l | - |
| | Fresh water sediment | 9.27 mg/kg dwt | - |
| | Sewage Treatment Plant | 0.9 mg/l | - |

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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Recommendations : Wear suitable gloves tested to EN374.
- < 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm
- 1 - 4 hours (breakthrough time): polyvinyl alcohol (PVA) thickness > 0.3 mm or 4H / Silver Shield® gloves.
- > 8 hours (breakthrough time): Viton® thickness > 0.3 mm gloves
- Wash hands before breaks and immediately after handling the product.
- 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.
- Filter type: A
- Filter type (spray application): A P
- 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.
- Colour** : Various
- Odour** : Slight
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.

SECTION 9: Physical and chemical properties

Initial boiling point and boiling range :

| Ingredient name | °C | °F | Method |
|---|--------|-------|--------|
| Xylene | 136.16 | 277.1 | |
| 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine | 302 | 575.6 | |

Flammability : Not available.

Lower and upper explosion limit : Lower: 0.8%
Upper: 6.7%

Flash point : Closed cup: 25°C (77°F)

Auto-ignition temperature :

| Ingredient name | °C | °F | Method |
|--|-----|-------|---------|
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | 375 | 707 | EU A.15 |
| Xylene | 432 | 809.6 | |

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure :

| Ingredient name | Vapour Pressure at 20°C | | | Vapour pressure at 50°C | | |
|--|-------------------------|------|--------|-------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| Xylene | 6.7 | 0.89 | | | | |
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | 0 | 0 | EU A.4 | 0 | 0 | EU A.4 |

Relative density : Not available.

Density : 1.9 g/cm³

Vapour density : Not available.

Explosive properties : Not available.

Oxidising 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 pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Date of issue/Date of revision : 28/10/2022 **Date of previous issue** : No previous validation **Version** : 1 **10/18**

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Label No :36351

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Reactive or incompatible with the following materials:
oxidising 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 |
|---|------------------------|---------|-------------|----------|
| Xylene Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | LC50 Inhalation Vapour | Rat | 21.7 mg/l | 4 hours |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Dermal | Rat | >3170 mg/kg | - |
| | LD50 Oral | Rat | 3230 mg/kg | - |

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

Acute toxicity estimates

| Route | ATE value |
|----------------------|----------------|
| Dermal | 40349.06 mg/kg |
| Inhalation (vapours) | 403.49 mg/l |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|-----------------|-------------|
| bis(4-(1,2-bis (ethoxycarbonyl)ethylamino) -3-methylcyclohexyl)methane Xylene | Eyes - Mild irritant | Rabbit | - | - | - |
| | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 uL | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| Zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

Conclusion/Summary : Causes severe skin burns and eye damage.

Sensitisation

Conclusion/Summary : May cause an allergic skin reaction.

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| Xylene | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---------------|
| Xylene | Category 2 | oral, inhalation | - |

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| Xylene | ASPIRATION HAZARD - Category 1 |

Information on 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 severe burns. 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 as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Long term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- 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.

SECTION 11: Toxicological information

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 |
|--|-----------------------------------|--|----------|
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | Acute EC50 113 mg/l | Algae | 72 hours |
| | Acute EC50 88.6 mg/l | Daphnia | 48 hours |
| Trizinc bis(orthophosphate) | Acute LC50 66 mg/l | Fish | 96 hours |
| | Acute EC50 0.32 mg/l | Algae - Selenastrum capricornutum | 72 hours |
| bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane | Acute EC50 0.96 mg/l | Crustaceans - Ceriodaphnia dubia | 48 hours |
| | Acute EC50 113 mg/l | Algae | 72 hours |
| Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | Acute EC50 88.6 mg/l | Daphnia | 48 hours |
| | Acute LC50 66 mg/l | Fish | 96 hours |
| Zinc oxide | EC50 1.68 mg/l | Aquatic plants - Desmododesmodus subspicatus | 72 hours |
| | Acute LC50 0.9 mg/l | Fish - Brachydanio rerio | 96 hours |
| Zinc oxide | Chronic NOEC 1 mg/l | Daphnia | 21 days |
| | Acute IC50 46 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |
| | Acute IC50 1.85 mg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute LC50 98 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |

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

12.2 Persistence and degradability

Conclusion/Summary : This product has not been tested for biodegradation.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-------------|-----------|
| tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate | 5.16 | 0.25 | low |
| Trizinc bis(orthophosphate) | - | 60960 | high |
| bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane | 5.99 | 0.25 | low |
| Xylene | 3.12 | 8.1 to 25.9 | low |
| Zinc oxide | - | 28960 | high |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

SECTION 12: Ecological information

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

13.1 Waste treatment methods

Product

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

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

European waste catalogue (EWC) : 080111*, 200127*

Packaging

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

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|---|---|---|---|
| 14.1 UN number or ID number | UN2924 | UN2924 | UN2924 | UN2924 |
| 14.2 UN proper shipping name | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (xylene, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (xylene, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (xylene, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (xylene, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine) |
| 14.3 Transport hazard class(es) | 3 (8) | 3 (8) | 3 (8) | 3 (8) |

Date of issue/Date of revision : 28/10/2022 **Date of previous issue** : No previous validation **Version** : 1 **14/18**

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Label No : 36351

SECTION 14: Transport information

| | | | | |
|----------------------------|------|------|------|--|
| | | | | |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | 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.
Tunnel code (D/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.

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 Maritime transport in bulk according to IMO instruments

: Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

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)

SECTION 15: Regulatory information

Not listed.

[Prior Informed Consent \(PIC\) \(649/2012/EU\)](#)

Not listed.

[Persistent Organic Pollutants](#)

Not listed.

[Seveso Directive](#)

This product is controlled under the Seveso Directive.

[Danger criteria](#)

Category

P5c
E2

[International regulations](#)

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

[Montreal Protocol](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

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

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

[Abbreviations and acronyms](#)

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
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 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | On basis of test data Calculation method Calculation method Calculation method Calculation method |

[Full text of abbreviated H statements](#)

SECTION 16: Other information

| | |
|-------|--|
| H226 | Flammable liquid and vapour. |
| 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. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H361f | Suspected of damaging fertility. |
| 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. |

[Full text of classifications \[CLP/GHS\]](#)

| | |
|-------------------|---|
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| 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 |
| Repr. 2 | REPRODUCTIVE TOXICITY - Category 2 |
| Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1A | SKIN SENSITISATION - Category 1A |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

Date of issue/ Date of revision : 28/10/2022

Date of previous issue : No previous validation

Version : 1

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All variants

[Notice to reader](#)

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

