

# SAFETY DATA SHEET



TEKNODUR COMBI 3560-09 - All variants

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

### 1.1 Product identifier

**Product name** : TEKNODUR COMBI 3560-09 - 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** : In an emergency, call 112

## 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


<b>Response</b>	: P391 - Collect spillage. P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	:  Contains: bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane; 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine; tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate and Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate
<b>Supplemental label elements</b>	: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: 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
 Titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≥10 - ≤25	Carc. 2, H351 (inhalation)	-	[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 - ≤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]
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	≤5	Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1]

## SECTION 3: Composition/information on ingredients

n-Butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≤5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
2-Methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤5	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
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 EC: 915-687-0 CAS: 1065336-91-5	≤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  <b>See Section 16 for the full text of the H statements declared above.</b>	M [Acute] = 1 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.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[\*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

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.

#### 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.

## SECTION 4: First aid measures

- 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, CO<sub>2</sub>, 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.
- 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

## SECTION 5: Firefighting measures

- 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. Absorb with an inert 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

### 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.

## SECTION 7: Handling and storage

### 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 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. 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 E2	5000 tonnes 200 tonnes	50000 tonnes 500 tonnes

### 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
 Butyl acetate	<b>Regulation on Limit Values - MAC (Austria, 4/2021)</b> <b>[Butylacetat alle Isomeren außer tert-Butylacet]</b> CEIL: 480 mg/m <sup>3</sup> . CEIL: 100 ppm. TWA 8 hours: 241 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Regulation on Limit Values - MAC (Austria, 4/2021)</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> . CEIL 5 minutes: 100 ppm 8 times per shift. CEIL 5 minutes: 550 mg/m <sup>3</sup> 8 times per shift.
 Butyl acetate	<b>Limit values (Belgium, 12/2023) [butylacetaat]</b> STEL 15 minutes: 712 mg/m <sup>3</sup> . STEL 15 minutes: 150 ppm. TWA 8 hours: 238 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Limit values (Belgium, 12/2023)</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m <sup>3</sup> .



## SECTION 8: Exposure controls/personal protection





 n-Butyl acetate	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)</b> Limit value 8 hours: 241 mg/m <sup>3</sup> . Limit value 15 minutes: 723 mg/m <sup>3</sup> . Limit value 15 minutes: 150 ppm. Limit value 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)</b> Absorbed through skin. Limit value 8 hours: 275 mg/m <sup>3</sup> . Limit value 15 minutes: 550 mg/m <sup>3</sup> . Limit value 15 minutes: 100 ppm. Limit value 8 hours: 50 ppm.
 n-Butyl acetate	<b>Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)</b> STELV 15 minutes: 723 mg/m <sup>3</sup> . STELV 15 minutes: 150 ppm. ELV 8 hours: 241 mg/m <sup>3</sup> . ELV 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)</b> Absorbed through skin. STELV 15 minutes: 550 mg/m <sup>3</sup> . STELV 15 minutes: 100 ppm. ELV 8 hours: 275 mg/m <sup>3</sup> . ELV 8 hours: 50 ppm.
 n-Butyl acetate	<b>Department of labour inspection (Cyprus, 7/2021)</b> STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m <sup>3</sup> .
2-Methoxy-1-methylethyl acetate	<b>Department of labour inspection (Cyprus, 7/2021)</b> Absorbed through skin. STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> .
 n-Butyl acetate	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)</b> TWA 8 hours: 241 mg/m <sup>3</sup> . STEL 15 minutes: 723 mg/m <sup>3</sup> . STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)</b> Absorbed through skin. TWA 8 hours: 275 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. STEL 15 minutes: 550 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm.
 n-Butyl acetate	<b>Working Environment Authority (Denmark, 3/2024) [butylacetat, alle isomerer]</b> TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m <sup>3</sup> . STEL 15 minutes: 723 mg/m <sup>3</sup> . STEL 15 minutes: 150 ppm.
2-Methoxy-1-methylethyl acetate	<b>Working Environment Authority (Denmark, 3/2024) [2-methoxy-1-methylethylacetat]</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> . STEL 15 minutes: 550 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm.

## SECTION 8: Exposure controls/personal protection



<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)</b>            STEL 15 minutes: 150 ppm.            STEL 15 minutes: 723 mg/m<sup>3</sup>.            TWA 8 hours: 50 ppm.            TWA 8 hours: 241 mg/m<sup>3</sup>.</p> <p><b>Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)</b> Absorbed through skin , Sensitiser.            STEL 15 minutes: 100 ppm.            STEL 15 minutes: 550 mg/m<sup>3</sup>.            TWA 8 hours: 275 mg/m<sup>3</sup>.            TWA 8 hours: 50 ppm.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>EU OEL (Europe, 1/2022)</b>            STEL 15 minutes: 150 ppm.            STEL 15 minutes: 723 mg/m<sup>3</sup>.            TWA 8 hours: 241 mg/m<sup>3</sup>.            TWA 8 hours: 50 ppm.</p> <p><b>EU OEL (Europe, 1/2022)</b> Absorbed through skin.            TWA 8 hours: 50 ppm.            TWA 8 hours: 275 mg/m<sup>3</sup>.            STEL 15 minutes: 100 ppm.            STEL 15 minutes: 550 mg/m<sup>3</sup>.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)</b>            TWA 8 hours: 150 ppm.            TWA 8 hours: 720 mg/m<sup>3</sup>.            STEL 15 minutes: 200 ppm.            STEL 15 minutes: 960 mg/m<sup>3</sup>.</p> <p><b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)</b> Absorbed through skin.            TWA 8 hours: 50 ppm.            TWA 8 hours: 270 mg/m<sup>3</sup>.            STEL 15 minutes: 100 ppm.            STEL 15 minutes: 550 mg/m<sup>3</sup>.</p>
<p>Castor oil</p>	<p><b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021) [Öljysumu]</b>            TWA 8 hours: 5 mg/m<sup>3</sup>. Form: Mist.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Ministry of Labor (France, 6/2024)</b>            TWA 8 hours: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            TWA 8 hours: 241 mg/m<sup>3</sup>. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            STEL 15 minutes: 150 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            STEL 15 minutes: 723 mg/m<sup>3</sup>. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</p> <p><b>Ministry of Labor (France, 6/2024)</b> Absorbed through skin.            STEL 15 minutes: 550 mg/m<sup>3</sup>. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            STEL 15 minutes: 100 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            TWA 8 hours: 275 mg/m<sup>3</sup>. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)            TWA 8 hours: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</p>
<p> Butyl acetate</p>	<p><b>TRGS 900 OEL (Germany, 6/2024)</b>            TWA 8 hours: 300 mg/m<sup>3</sup>.            TWA 8 hours: 62 ppm.            PEAK 15 minutes: 600 mg/m<sup>3</sup>.            PEAK 15 minutes: 124 ppm.</p> <p><b>DFG MAC-values list (Germany, 7/2023)</b> Develop C.            TWA 8 hours: 100 ppm.</p>









## SECTION 8: Exposure controls/personal protection

2-Methoxy-1-methylethyl acetate	<p>PEAK 15 minutes: 200 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 480 mg/m<sup>3</sup>. PEAK 15 minutes: 960 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p> <p><b>TRGS 900 OEL (Germany, 6/2024)</b> TWA 8 hours: 270 mg/m<sup>3</sup>. PEAK 15 minutes: 270 mg/m<sup>3</sup>. TWA 8 hours: 50 ppm. PEAK 15 minutes: 50 ppm.</p> <p><b>DFG MAC-values list (Germany, 7/2023)</b> Develop C. TWA 8 hours: 50 ppm. PEAK 15 minutes: 50 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 270 mg/m<sup>3</sup>. PEAK 15 minutes: 270 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p>
Castor oil	<p><b>TRGS 900 OEL (Germany, 6/2024) [Triglyceride]</b> PEAK 15 minutes: 20 mg/m<sup>3</sup>. Form: Respirable fraction. TWA 8 hours: 5 mg/m<sup>3</sup>. Form: Respirable fraction.</p>
 n-Butyl acetate	<p><b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)</b> TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m<sup>3</sup>. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m<sup>3</sup>.</p>
2-Methoxy-1-methylethyl acetate	<p><b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m<sup>3</sup>. STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m<sup>3</sup>.</p>
 n-Butyl acetate	<p><b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)</b> Sensitiser. TWA 8 hours: 241 mg/m<sup>3</sup>. PEAK 15 minutes: 723 mg/m<sup>3</sup>. PEAK 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.</p>
2-Methoxy-1-methylethyl acetate	<p><b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)</b> TWA 8 hours: 275 mg/m<sup>3</sup>. PEAK 15 minutes: 550 mg/m<sup>3</sup>. PEAK 15 minutes: 100 ppm. TWA 8 hours: 50 ppm.</p>
 n-Butyl acetate	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023) [bútýlasetat, allir ísómerar]</b> TWA 8 hours: 241 mg/m<sup>3</sup>. TWA 8 hours: 50 ppm. STEL 15 minutes: 723 mg/m<sup>3</sup>. STEL 15 minutes: 150 ppm.</p>
2-Methoxy-1-methylethyl acetate	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023)</b> Absorbed through skin. STEL 15 minutes: 550 mg/m<sup>3</sup>. STEL 15 minutes: 100 ppm. TWA 8 hours: 275 mg/m<sup>3</sup>. TWA 8 hours: 50 ppm.</p>
 n-Butyl acetate	<p><b>NAOSH (Ireland, 4/2024)</b> Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 241 mg/m<sup>3</sup>. OELV 15 minutes: 150 ppm. OELV 15 minutes: 723 mg/m<sup>3</sup>.</p>
2-Methoxy-1-methylethyl acetate	<p><b>NAOSH (Ireland, 4/2024)</b> Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 275 mg/m<sup>3</sup>. OELV 15 minutes: 100 ppm. OELV 15 minutes: 550 mg/m<sup>3</sup>.</p>


## SECTION 8: Exposure controls/personal protection

Zinc oxide	<b>NAOSH (Ireland, 4/2024)</b> Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 2 mg/m <sup>3</sup> . Form: respirable fraction. OELV 15 minutes: 10 mg/m <sup>3</sup> . Form: fume.
 Butyl acetate	<b>EU OEL (Europe, 1/2022)</b> STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m <sup>3</sup> . TWA 8 hours: 241 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020)</b> Absorbed through skin. Limit value 8 hours: 50 ppm. Limit value 8 hours: 275 mg/m <sup>3</sup> . Short Term 15 minutes: 100 ppm. Short Term 15 minutes: 550 mg/m <sup>3</sup> .
 Butyl acetate	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)</b> TWA 8 hours: 241 mg/m <sup>3</sup> . STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm.
2-Methoxy-1-methylethyl acetate	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m <sup>3</sup> .
 Butyl acetate	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)</b> TWA 8 hours: 241 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. STEL 15 minutes: 723 mg/m <sup>3</sup> . STEL 15 minutes: 150 ppm.
2-Methoxy-1-methylethyl acetate	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)</b> Absorbed through skin. TWA 8 hours: 250 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. STEL 15 minutes: 400 mg/m <sup>3</sup> . STEL 15 minutes: 75 ppm.
Castor oil	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024) [tepalo rūkas, įskaitant dūmus]</b> TWA 8 hours: 1 mg/m <sup>3</sup> . Form: Mist. STEL 15 minutes: 3 mg/m <sup>3</sup> . Form: Mist.
Zinc oxide	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)</b> TWA 8 hours: 5 mg/m <sup>3</sup> .
 Butyl acetate	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)</b> STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m <sup>3</sup> .
2-Methoxy-1-methylethyl acetate	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m <sup>3</sup> .


## SECTION 8: Exposure controls/personal protection

<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>EU OEL (Europe, 1/2022)</b>            STEL 15 minutes: 150 ppm.            STEL 15 minutes: 723 mg/m<sup>3</sup>.            TWA 8 hours: 241 mg/m<sup>3</sup>.            TWA 8 hours: 50 ppm.</p> <p><b>EU OEL (Europe, 1/2022)</b> Absorbed through skin.            TWA 8 hours: 50 ppm.            TWA 8 hours: 275 mg/m<sup>3</sup>.            STEL 15 minutes: 100 ppm.            STEL 15 minutes: 550 mg/m<sup>3</sup>.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)</b>            TWA 8 hours: 241 mg/m<sup>3</sup>.            STEL 15 minutes: 723 mg/m<sup>3</sup>.            STEL 15 minutes: 150 ppm.            TWA 8 hours: 50 ppm.</p> <p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)</b>            TWA 8 hours: 550 mg/m<sup>3</sup>.            TWA 8 hours: 100 ppm.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>FOR-2011-12-06-1358 (Norway, 12/2022)</b>            STEL 15 minutes: 723 mg/m<sup>3</sup>.            STEL 15 minutes: 150 ppm.            TWA 8 hours: 241 mg/m<sup>3</sup>.            TWA 8 hours: 50 ppm.</p> <p><b>FOR-2011-12-06-1358 (Norway, 12/2022)</b> Absorbed through skin.            TWA 8 hours: 50 ppm.            TWA 8 hours: 270 mg/m<sup>3</sup>.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023)</b>            TWA 8 hours: 240 mg/m<sup>3</sup>.            STEL 15 minutes: 720 mg/m<sup>3</sup>.</p> <p><b>Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023)</b> Absorbed through skin.            TWA 8 hours: 260 mg/m<sup>3</sup>.            STEL 15 minutes: 520 mg/m<sup>3</sup>.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Portuguese Institute of Quality (Portugal, 11/2014)</b>            TWA 8 hours: 150 ppm.            STEL 15 minutes: 200 ppm.</p> <p><b>EU OEL (Europe, 1/2022)</b> Absorbed through skin.            TWA 8 hours: 50 ppm.            TWA 8 hours: 275 mg/m<sup>3</sup>.            STEL 15 minutes: 100 ppm.            STEL 15 minutes: 550 mg/m<sup>3</sup>.</p>
<p> Butyl acetate</p> <p>2-Methoxy-1-methylethyl acetate</p>	<p><b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)</b>            VLA 8 hours: 241 mg/m<sup>3</sup>.            VLA 8 hours: 50 ppm.            Short term 15 minutes: 723 mg/m<sup>3</sup>.            Short term 15 minutes: 150 ppm.</p> <p><b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)</b> Absorbed through skin.            VLA 8 hours: 275 mg/m<sup>3</sup>.            VLA 8 hours: 50 ppm.            Short term 15 minutes: 550 mg/m<sup>3</sup>.            Short term 15 minutes: 100 ppm.</p>


## SECTION 8: Exposure controls/personal protection

 Butyl acetate


2-Methoxy-1-methylethyl acetate

 Butyl acetate

2-Methoxy-1-methylethyl acetate

 Butyl acetate

2-Methoxy-1-methylethyl acetate

 Butyl acetate

2-Methoxy-1-methylethyl acetate

Castor oil

Zinc oxide

**Government regulation SR c. 355/2006 (Slovakia, 7/2024)**

**[butylacetáty]** Inhalation sensitiser.

TWA 8 hours: 241 mg/m<sup>3</sup> (Butyl acetates).

TWA 8 hours: 50 ppm (Butyl acetates).

STEL 15 minutes: 723 mg/m<sup>3</sup> (Butyl acetates).

STEL 15 minutes: 150 ppm (Butyl acetates).

**Government regulation SR c. 355/2006 (Slovakia, 7/2024)**

Absorbed through skin , Inhalation sensitiser.

TWA 8 hours: 275 mg/m<sup>3</sup>.

TWA 8 hours: 50 ppm.

STEL 15 minutes: 550 mg/m<sup>3</sup>.

STEL 15 minutes: 100 ppm.

**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)**

TWA 8 hours: 241 mg/m<sup>3</sup>.

TWA 8 hours: 50 ppm.

KTV 15 minutes: 723 mg/m<sup>3</sup> 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].

KTV 15 minutes: 150 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].

**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)**

Absorbed through skin.

TWA 8 hours: 275 mg/m<sup>3</sup>.

TWA 8 hours: 50 ppm.

KTV 15 minutes: 550 mg/m<sup>3</sup> 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].

KTV 15 minutes: 100 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].

**National institute of occupational safety and health (Spain, 1/2024)**

TWA 8 hours: 50 ppm.

TWA 8 hours: 241 mg/m<sup>3</sup>.

STEL 15 minutes: 150 ppm.

STEL 15 minutes: 723 mg/m<sup>3</sup>.

**National institute of occupational safety and health (Spain, 1/2024)** Absorbed through skin.

TWA 8 hours: 50 ppm.

TWA 8 hours: 275 mg/m<sup>3</sup>.

STEL 15 minutes: 100 ppm.

STEL 15 minutes: 550 mg/m<sup>3</sup>.

**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [butyl acetate]**

TWA 8 hours: 50 ppm.

TWA 8 hours: 241 mg/m<sup>3</sup>.

STEL 15 minutes: 150 ppm.

STEL 15 minutes: 723 mg/m<sup>3</sup>.

**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** Absorbed through skin.

TWA 8 hours: 50 ppm.

TWA 8 hours: 275 mg/m<sup>3</sup>.

STEL 15 minutes: 100 ppm.

STEL 15 minutes: 550 mg/m<sup>3</sup>.

**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [oil mist, incl. oil fumes]**



TWA 8 hours: 1 mg/m<sup>3</sup>. Form: mist and fume.

STEL 15 minutes: 3 mg/m<sup>3</sup>. Form: mist and fume.

**Work environment authority Regulation 2018:1 (Sweden, 11/2022)**

TWA 8 hours: 5 mg/m<sup>3</sup>. Form: Total dust.

SECTION 8: Exposure controls/personal protection

 Butyl acetate	<b>SUVA (Switzerland, 1/2024)</b> TWA 8 hours: 50 ppm. TWA 8 hours: 240 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 720 mg/m³.
2-Methoxy-1-methylethyl acetate	<b>SUVA (Switzerland, 1/2024)</b> TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 275 mg/m³.
Castor oil	<b>SUVA (Switzerland, 1/2024) [Triglyceride]</b> STEL 15 minutes: 20 mg/m³. Form: Inhalable fraction. TWA 8 hours: 5 mg/m³. Form: Inhalable fraction.
 Butyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020)</b> STEL 15 minutes: 966 mg/m³. STEL 15 minutes: 200 ppm. TWA 8 hours: 724 mg/m³. TWA 8 hours: 150 ppm.
2-Methoxy-1-methylethyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020)</b> Absorbed through skin. STEL 15 minutes: 548 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 274 mg/m³. STEL 15 minutes: 100 ppm.

Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
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## SECTION 8: Exposure controls/personal protection

No exposure indices known.  
No exposure indices known.  
No exposure indices known.  
No exposure indices known.  
No exposure indices known.  
No exposure indices known.  
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

Titanium dioxide

bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane

#### Result

##### DNEL - General population - Long term - Inhalation

28 µg/m<sup>3</sup>  
Effects: Local

##### DNEL - Workers - Long term - Inhalation

170 µg/m<sup>3</sup>  
Effects: Local

##### DNEL - General population - Short term - Oral

4.2 mg/kg bw/day  
Effects: Systemic

##### DNEL - General population - Long term - Oral

4.2 mg/kg bw/day  
Effects: Systemic

##### DNEL - General population - Short term - Dermal

4.2 mg/kg bw/day  
Effects: Systemic

##### DNEL - General population - Long term - Dermal

4.2 mg/kg bw/day  
Effects: Systemic

##### DNEL - Workers - Long term - Dermal

11.9 mg/kg bw/day  
Effects: Systemic

##### DNEL - General population - Short term - Inhalation

14.5 mg/m<sup>3</sup>  
Effects: Systemic

##### DNEL - General population - Long term - Inhalation

14.5 mg/m<sup>3</sup>  
Effects: Systemic

##### DNEL - Workers - Long term - Inhalation

84 mg/m<sup>3</sup>  
Effects: Systemic

##### DNEL - Workers - Short term - Inhalation

672 mg/m<sup>3</sup>



## SECTION 8: Exposure controls/personal protection

1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine

Effects: Systemic

**DNEL - General population - Long term - Oral**

0.3 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Short term - Inhalation**

0.073 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Long term - Inhalation**

0.073 mg/m<sup>3</sup>

Effects: Local

tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate

**DNEL - General population - Short term - Oral**

1.4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Oral**

1.4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Dermal**

1.4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Dermal**

1.4 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Inhalation**

4.8 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

4.8 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

28 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Short term - Inhalation**

112 mg/m<sup>3</sup>

Effects: Systemic

n-Butyl acetate

**DNEL - General population - Long term - Oral**

2 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Oral**

2 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Dermal**

3.4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Dermal**

6 mg/kg bw/day

Effects: Systemic

## SECTION 8: Exposure controls/personal protection

### **DNEL - Workers - Long term - Dermal**

7 mg/kg bw/day

Effects: Systemic

### **DNEL - Workers - Short term - Dermal**

11 mg/kg bw/day

Effects: Systemic

### **DNEL - General population - Long term - Inhalation**

12 mg/m<sup>3</sup>

Effects: Systemic

### **DNEL - General population - Long term - Inhalation**

35.7 mg/m<sup>3</sup>

Effects: Local

### **DNEL - Workers - Long term - Inhalation**

48 mg/m<sup>3</sup>

Effects: Systemic

### **DNEL - General population - Short term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Local

### **DNEL - General population - Short term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Systemic

### **DNEL - Workers - Long term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Local

### **DNEL - Workers - Short term - Inhalation**

600 mg/m<sup>3</sup>

Effects: Local

### **DNEL - Workers - Short term - Inhalation**

600 mg/m<sup>3</sup>

Effects: Systemic

2-Methoxy-1-methylethyl acetate

### **DNEL - General population - Long term - Inhalation**

33 mg/m<sup>3</sup>

Effects: Local

### **DNEL - General population - Long term - Inhalation**

33 mg/m<sup>3</sup>

Effects: Systemic

### **DNEL - General population - Long term - Oral**

36 mg/kg bw/day

Effects: Systemic

### **DNEL - Workers - Long term - Inhalation**

275 mg/m<sup>3</sup>

Effects: Systemic

### **DNEL - General population - Long term - Dermal**

320 mg/kg bw/day

Effects: Systemic

### **DNEL - Workers - Short term - Inhalation**

550 mg/m<sup>3</sup>

Effects: Local

### **DNEL - Workers - Long term - Dermal**

## SECTION 8: Exposure controls/personal protection

796 mg/kg bw/day

Effects: Systemic

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

**DNEL - General population - Long term - Oral**

0.18 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

0.31 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - General population - Long term - Dermal**

0.9 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

1.27 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

1.8 mg/kg bw/day

Effects: Systemic

### PNECs

Not 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, vapour 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**

- : 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

## SECTION 8: Exposure controls/personal protection

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.
- Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
 Butyl acetate	126	258.8	OECD 103
2-Methoxy-1-methylethyl acetate	145.8	294.4	OECD 103

- Flammability** : Not available.
- Lower and upper explosion limit** :  Lower: 1.4% (n-butyl acetate)  
Upper: 7.6% (n-butyl acetate)
- Flash point** : Closed cup: 25°C (77°F)
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
 2-Methoxy-1-methylethyl acetate	333	631.4	DIN 51794
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate	375	707	EU A.15

- Decomposition temperature** : Not available.
- pH** :  Not applicable.
- Viscosity** :  Not available.
- Solubility(ies)** :  
Not available.
- Solubility in water** : Not available.

## SECTION 9: Physical and chemical properties

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
n-Butyl acetate	11.25096	1.5	DIN EN 13016-2			
2-Methoxy-1-methylethyl acetate	2.7	0.36	OECD 104			

Relative density : Not available.

Density : 0.8 g/cm<sup>3</sup>

Vapour density : Not available.

### Particle characteristics

Median particle size : Not applicable.

## 9.2 Other information

### 9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

### 9.2.2 Other safety characteristics

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.

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

n-Butyl acetate

##### Result

Rat - Oral - LD50

10760 mg/kg

EU

Rabbit - Dermal - LD50

14112 mg/kg

Rat - Inhalation - LC50 Vapour

0.74 mg/l [4 hours]

2-Methoxy-1-methylethyl acetate

Rat - Oral - LD50

8532 mg/kg

## SECTION 11: Toxicological information

### Rabbit - Dermal - LD50

>5 g/kg

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

### Rat - Oral - LD50

3230 mg/kg

### Rat - Dermal - LD50

>3170 mg/kg

**Conclusion/Summary [Product]** : Not available.

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Butyl acetate	10760	14112	N/A	N/A	N/A
2-Methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	N/A
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	3230	N/A	N/A	N/A	N/A

### Skin corrosion/irritation

#### Product/ingredient name

Titanium dioxide

#### Result

**Human - Skin - Mild irritant**

Duration of treatment/exposure: 72 hours

Amount/concentration applied: 300 ug l

n-Butyl acetate

**Rabbit - Skin - Moderate irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Zinc oxide

**Rabbit - Skin - Mild irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Not available.

### Serious eye damage/eye irritation

#### Product/ingredient name

Bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane

#### Result

**Rabbit - Eyes - Mild irritant**

n-Butyl acetate

**Rabbit - Eyes - Moderate irritant**

Amount/concentration applied: 100 mg

Zinc oxide

**Rabbit - Eyes - Mild irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Not available.

#### Ingredient name

Bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane

#### Conclusion/Summary

Non-irritating to the eyes.

### Respiratory corrosion/irritation

Not available.



## SECTION 11: Toxicological information

**Conclusion/Summary [Product]** : Not available.

### Respiratory or skin sensitization

Not available.

### **Skin**

**Conclusion/Summary [Product]** : Not available.

### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

### Germ cell mutagenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Not available.

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

#### **Product/ingredient name**

n-Butyl acetate  
2-Methoxy-1-methylethyl acetate

#### **Result**

STOT SE 3, H336 (Narcotic effects)  
STOT SE 3, H336 (Narcotic effects)

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : 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.

## SECTION 11: Toxicological information

**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 [Product]** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

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

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product/ingredient name

Titanium dioxide

#### Result

##### **Acute - LC50 - Marine water**

Fish - Mummichog - *Fundulus heteroclitus*  
>1000000 µg/l [96 hours]  
Effect: Mortality

##### **Acute - LC50 - Fresh water**

Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate  
Age: <24 hours  
3 mg/l [48 hours]  
Effect: Mortality

bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane

##### **Acute - LC50**

Fish  
66 mg/l [96 hours]

##### **Acute - EC50**

Daphnia  
88.6 mg/l [48 hours]

##### **Acute - EC50**

Algae  
113 mg/l [72 hours]

## SECTION 12: Ecological information

Trizinc bis(orthophosphate)

### Acute - EC50

Crustaceans - *Ceriodaphnia dubia*  
0.96 mg/l [48 hours]

### Acute - EC50

Algae - *Selenastrum capricornutum*  
0.32 mg/l [72 hours]

tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate

### Acute - LC50

Fish  
66 mg/l [96 hours]

### Acute - EC50

Daphnia  
88.6 mg/l [48 hours]

### Acute - EC50

Algae  
113 mg/l [72 hours]

n-Butyl acetate

### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*  
Age: 31 to 32 days; Size: 21.6 mm; Weight: 0.175 g  
18000 µg/l [96 hours]  
Effect: Mortality

### Acute - LC50 - Marine water

Crustaceans - Brine shrimp - *Artemia salina*  
32 mg/l [48 hours]  
Effect: Mortality

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 - LC50

OECD [Fish, Acute Toxicity Test]  
Fish - *Brachydanio rerio*  
0.9 mg/l [96 hours]

### EC50

OECD [Alga, Growth Inhibition Test]  
Aquatic plants - *Desmodesmodus subspicatus*  
1.68 mg/l [72 hours]

### Chronic - NOEC

OECD [Daphnia Magna Reproduction Test]  
Daphnia - Daphnia  
1 mg/l [21 days]

Zinc oxide

### Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia magna* - Neonate  
Age: <24 hours  
98 µg/l [48 hours]  
Effect: Mortality

### Acute - IC50 - Fresh water

Algae - Green algae - *Pseudokirchneriella subcapitata* - Exponential growth phase  
46 µg/l [72 hours]  
Effect: Population

### Acute - LC50 - Fresh water

US EPA  
Fish - Rainbow trout, donaldson trout - *Oncorhynchus mykiss*  
Weight: 0.78 g  
1.1 ppm [96 hours]  
Effect: Mortality

## SECTION 12: Ecological information

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	5.99	0.25	Low
Trizinc bis(orthophosphate)	-	60960	High
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate	5.16	0.25	Low
n-Butyl acetate	2.3	-	Low
2-Methoxy-1-methylethyl acetate	1.2	-	Low
Zinc oxide	-	28960	High

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
Bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	4.86	73137.1
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine	3.09	1243.57
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate	4.69	49262.1
n-Butyl acetate	1.52	33.2139
2-Methoxy-1-methylethyl acetate	0.36	2.31363

#### Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Titanium dioxide	No	No	No	No	No	No	No
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	No	No	No	No	No	No	No
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]-cyclohexanemethylamine	No	No	No	No	No	No	No
tetraethylN,N'-(methylenedicyclohexane-4,1-diyl)bis-dl-aspartate	No	No	No	No	No	No	No
n-Butyl acetate	No	No	No	No	No	No	No
2-Methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No
Zinc oxide	No	No	No	No	No	No	No

**Mobility** : Not available.

## SECTION 12: Ecological information

### Conclusion/Summary

: The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Titanium dioxide	No	No	No	No	No	No	No
bis(4-(1,2-bis (ethoxycarbonyl)ethylamino) -3-methylcyclohexyl)methane	No	No	No	No	No	No	No
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No
1,3,3-trimethyl-N- (2-methylpropylidene)-5-[ (2-methylpropylidene)amino] -cyclohexanemethylamine	No	No	No	No	No	No	No
tetraethylN,N'- (methylenedicyclohexane- 4,1-diyl)bis-dl-aspartate	No	No	No	No	No	No	No
n-Butyl acetate	No	No	No	No	No	No	No
2-Methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
Reaction mass of Bis (1,2,2,6,6-pentamethyl- 4-piperidyl) sebacate and Methyl	No	No	No	No	No	No	No
1,2,2,6,6-pentamethyl- 4-piperidyl sebacate	No	No	No	No	No	No	No
Zinc oxide	No	No	No	No	No	No	No

#### Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Titanium dioxide	No	No	No	No	No	No	No
bis(4-(1,2-bis (ethoxycarbonyl)ethylamino) -3-methylcyclohexyl)methane	No	No	No	No	No	No	No
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No
1,3,3-trimethyl-N- (2-methylpropylidene)-5-[ (2-methylpropylidene)amino] -cyclohexanemethylamine	No	No	No	No	No	No	No
tetraethylN,N'- (methylenedicyclohexane- 4,1-diyl)bis-dl-aspartate	No	No	No	No	No	No	No
n-Butyl acetate	No	No	No	No	No	No	No
2-Methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
Reaction mass of Bis (1,2,2,6,6-pentamethyl- 4-piperidyl) sebacate and Methyl	No	No	No	No	No	No	No
1,2,2,6,6-pentamethyl- 4-piperidyl sebacate	No	No	No	No	No	No	No
Zinc oxide	No	No	No	No	No	No	No

### Conclusion/Summary

: The product does not meet the criteria to be considered as a PBT or vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

### 12.6 Endocrine disrupting properties

Not available.

## SECTION 12: Ecological information

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 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.













**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
<b>14.1 UN number or ID number</b>	UN2924	UN2924	UN2924	UN2924
<b>14.2 UN proper shipping name</b>	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (n-butyl acetate, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine)	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (n-butyl acetate, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine)	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (n-butyl acetate, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine)	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (n-butyl acetate, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine)
<b>14.3 Transport hazard class(es)</b>	3 (8)   	3 (8)   	3 (8)   	3 (8)   
<b>14.4 Packing group</b>	III	III	III	III



## SECTION 14: Transport information

14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
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### Additional information

ADR/RID	: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Tunnel code</b> (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

Product/ingredient name	%	Designation [Usage]
TEKNODUR COMBI 3560-09	≥90	3

**Labelling** :

#### Other EU regulations

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

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

**Explosive precursors** : ☒ Not applicable.

#### Ozone depleting substances (EU 2024/590)

Not listed.

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

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

## SECTION 15: Regulatory information

This product is controlled under the Seveso Directive.

### Danger criteria

#### Category

P<sub>501</sub>  
E2

### National regulations

#### Austria

VbF class : Category 3

Limitation of the use of organic solvents : Permitted.

#### Belgium

#### Czech Republic

Storage code : II

#### Denmark

Fire class : F+1

### Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
Titanium dioxide	Listed	-

MAL-code : 5-5

Protection based on MAL : According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:

**General:** Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 5-5

**Application:** When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new\* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new\* booths and cabins with non-atomizing guns.

- Protective clothing must be worn.

During non-atomising spraying in existing\* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in existing\* spray booths, if the operator is outside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing\* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and protective clothing must be worn.

When spraying in new\* booths if the operator is outside the spray zone.

- Air-supplied full mask must be worn.

## SECTION 15: Regulatory information

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, protective clothing and hood must be worn.

**Drying:** Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

**Polishing:** When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

**Caution** The regulations contain other stipulations in addition to the above.

\*See Regulations.

- Restrictions on use** : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.
- List of undesirable substances** : Not listed
- Carcinogenic waste** : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

### Finland

### France

- Social Security Code, Articles L 461-1 to L 461-7** :  Butyl acetate RG 84  
2-Methoxy-1-methylethyl acetate RG 84

- Reinforced medical surveillance** : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

### Germany

**Storage class (TRGS 510)** : 3

### Hazardous incident ordinance


This product is controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

Category	Reference number
P5c	1.2.5.3
E2	1.3.2

**Hazard class for water** : 2

### Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
 5.2.1	Total dust	59.3
5.2.5	Organic substances	34.9
5.2.5 [I]	Organic substances	10.5
5.2.10	Soil polluting substances	5.9

- AOX** : The product contains organically bound halogens and can contribute to the AOX value in waste water.


### Italy

- D.Lgs. 152/06** : Not determined.

### Netherlands

**Ministry of Social Affairs and Employment (SZW) - Carcinogenic substances and processes, mutagenic or reprotoxic substances**

## SECTION 15: Regulatory information

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
 Solvent naphtha (petroleum), light arom. xylene	Listed  -	Listed  -	-  -	-  Development 2	-  -

**Water Discharge Policy (ABM)** : Z(1) Non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/ bioaccumulative potential/ toxicity or persistence). Decontamination effort: Z

Norway

Sweden

**Flammable liquid class (SRVFS 2005:10)** : 2a

Switzerland

**VOC content** :  VOC (w/w): 9%

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

**Date of issue/Date of revision** : 09/05/2025 **Date of previous issue** : 28/10/2022 **Version** : 5 **30/32**

 EKNODUR COMBI 3560-09 - All variants

**Label No** :  17797

## SECTION 16: Other information

H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Full text of classifications [CLP/GHS]

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
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 09/05/2025

**Date of previous issue** : 28/10/2022

**Version** : 5

TEKNODUR COMBI 3560-09

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.

