

SAFETY DATA SHEET



TEKNONISO COMBI 333-301 - RAL 1023

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

1.1 Product identifier

Product name : TEKNONISO COMBI 333-301 - RAL 1023

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

Eye Dam. 1, H318

Aquatic Chronic 3, H412

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.
H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

Response : P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.

Storage : Not applicable.

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Label No : 83732

SECTION 2: Hazards identification

Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: Contains: Propan-1-ol
Supplemental label elements	:
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
tetraethyl silicate	REACH #: 01-2119496195-28 EC: 201-083-8 CAS: 78-10-4 Index: 014-005-00-0	≥10 - <20	Flam. Liq. 3, H226 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
n-Butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≤10	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Propan-1-ol	REACH #: 01-2119486761-29 EC: 200-746-9 CAS: 71-23-8 Index: 603-003-00-0	≤5	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336	-	[1]
Trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Flammable liquid and 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 harmful 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
sulfur 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 spill 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.

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.

SECTION 6: Accidental release measures

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). 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	5000 tonne	50000 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
tetraethyl silicate	Regulation on Limit Values - MAC (Austria, 4/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours. CEIL: 10 ppm, 8 times per shift, 5 minutes. CEIL: 88 mg/m ³ , 8 times per shift, 5 minutes.
n-Butyl acetate	Regulation on Limit Values - MAC (Austria, 4/2021). [Butyl acetate (all isomers except tert-butyl acetate)] CEIL: 480 mg/m ³ 15 minutes. CEIL: 100 ppm 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
Propan-1-ol	Regulation on Limit Values - MAC (Austria, 4/2021). TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours.
tetraethyl silicate	Limit values (Belgium, 5/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Limit values (Belgium, 5/2021). [butyl acetate, all isomers] STEL: 712 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 238 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
Propan-1-ol	Limit values (Belgium, 5/2021). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 250 mg/m ³ 8 hours.
tetraethyl silicate	Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Limit value 8 hours: 44 mg/m ³ 8 hours. Limit value 8 hours: 5 ppm 8 hours.
n-Butyl acetate	Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Limit value 8 hours: 241 mg/m ³ 8 hours. Limit value 15 min: 723 mg/m ³ 15 minutes. Limit value 15 min: 150 ppm 15 minutes. Limit value 8 hours: 50 ppm 8 hours.
Propan-1-ol	Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Absorbed through skin. Limit value 15 min: 500 mg/m ³ 15 minutes. Limit value 8 hours: 300 mg/m ³ 8 hours.
tetraethyl silicate	Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). ELV: 5 ppm 8 hours. ELV: 44 mg/m ³ 8 hours.
n-Butyl acetate	Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). STELV: 723 mg/m ³ 15 minutes. STELV: 150 ppm 15 minutes. ELV: 241 mg/m ³ 8 hours. ELV: 50 ppm 8 hours.
Propan-1-ol	Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). STELV: 625 mg/m ³ 15 minutes. STELV: 250 ppm 15 minutes. ELV: 500 mg/m ³ 8 hours. ELV: 200 ppm 8 hours.

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tetraethyl silicate	Department of labour inspection (Cyprus, 7/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m³ 8 hours.
n-Butyl acetate	Department of labour inspection (Cyprus, 7/2021). STEL: 150 ppm 15 minutes. STEL: 723 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 241 mg/m³ 8 hours.
tetraethyl silicate	Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). TWA: 44 mg/m³ 8 hours. TWA: 5.06 ppm 8 hours. STEL: 176 mg/m³ 15 minutes. STEL: 20.24 ppm 15 minutes.
n-Butyl acetate	Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). TWA: 241 mg/m³ 8 hours. STEL: 723 mg/m³ 15 minutes. STEL: 149.661 ppm 15 minutes. TWA: 49.887 ppm 8 hours.
Propan-1-ol	Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). Absorbed through skin. TWA: 500 mg/m³ 8 hours. TWA: 200 ppm 8 hours. STEL: 1000 mg/m³ 15 minutes. STEL: 400 ppm 15 minutes.
tetraethyl silicate	Working Environment Authority (Denmark, 6/2022). TWA: 5 ppm 8 hours. TWA: 44 mg/m³ 8 hours. STEL: 88 mg/m³ 15 minutes. STEL: 10 ppm 15 minutes.
n-Butyl acetate	Working Environment Authority (Denmark, 6/2022). [Butyl acetate, all isomers] TWA: 50 ppm 8 hours. TWA: 241 mg/m³ 8 hours. STEL: 723 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes.
Propan-1-ol	Working Environment Authority (Denmark, 6/2022). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 500 mg/m³ 8 hours. STEL: 1000 mg/m³ 15 minutes. STEL: 400 ppm 15 minutes.
tetraethyl silicate	Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). TWA: 5 ppm 8 hours. TWA: 44 mg/m³ 8 hours.
n-Butyl acetate	Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). STEL: 150 ppm 15 minutes. STEL: 723 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 241 mg/m³ 8 hours.
Propan-1-ol	Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). [Propanol] TWA: 350 mg/m³ 8 hours. TWA: 150 ppm 8 hours. STEL: 600 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes.

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tetraethyl silicate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
tetraethyl silicate	Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). TWA: 5 ppm 8 hours. TWA: 43 mg/m ³ 8 hours. STEL: 10 ppm 15 minutes. STEL: 86 mg/m ³ 15 minutes.
n-Butyl acetate	Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). TWA: 150 ppm 8 hours. TWA: 720 mg/m ³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 960 mg/m ³ 15 minutes.
Propan-1-ol	Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 620 mg/m ³ 15 minutes.
tetraethyl silicate	Ministry of Labor (France, 10/2022). Notes: Indicative regulatory limit values (decree of 30-06-2004 modified) TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Ministry of Labor (France, 10/2022). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA: 50 ppm 8 hours. TWA: 241 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes.
Propan-1-ol	Ministry of Labor (France, 10/2022). Notes: Permissible limit values (circulars) TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours.
tetraethyl silicate	DFG MAC-values list (Germany, 7/2022). TWA: 10 ppm 8 hours. PEAK: 10 ppm, 4 times per shift, 15 minutes. TWA: 86 mg/m ³ 8 hours. PEAK: 86 mg/m ³ , 4 times per shift, 15 minutes.
n-Butyl acetate	TRGS 900 OEL (Germany, 6/2022). TWA: 12 mg/m ³ 8 hours. TWA: 1.4 ppm 8 hours. PEAK: 12 mg/m ³ 15 minutes. PEAK: 1.4 ppm 15 minutes.
	DFG MAC-values list (Germany, 7/2022). TWA: 100 ppm 8 hours. PEAK: 200 ppm, 4 times per shift, 15 minutes. TWA: 480 mg/m ³ 8 hours. PEAK: 960 mg/m ³ , 4 times per shift, 15 minutes.
	TRGS 900 OEL (Germany, 6/2022). TWA: 300 mg/m ³ 8 hours. TWA: 62 ppm 8 hours. PEAK: 600 mg/m ³ 15 minutes. PEAK: 124 ppm 15 minutes.

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tetraethyl silicate	Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). TWA: 50 ppm 8 hours. TWA: 241 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes.
Propan-1-ol	Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 625 mg/m ³ 15 minutes.
tetraethyl silicate	5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Skin sensitiser. Inhalation sensitiser. TWA: 44 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
n-Butyl acetate	5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Skin sensitiser. Inhalation sensitiser. TWA: 241 mg/m ³ 8 hours. PEAK: 723 mg/m ³ 15 minutes. PEAK: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
tetraethyl silicate	Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). TWA: 44 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
n-Butyl acetate	Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). [butyl acetate, all isomers] TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 723 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes.
Propan-1-ol	Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin. TWA: 500 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.
tetraethyl silicate	NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 44 mg/m ³ 8 hours. OELV-8hr: 5 ppm 8 hours.
n-Butyl acetate	NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 50 ppm 8 hours. OELV-8hr: 241 mg/m ³ 8 hours. OELV-15min: 150 ppm 15 minutes. OELV-15min: 723 mg/m ³ 15 minutes.
Propan-1-ol	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV-8hr: 100 ppm 8 hours.
tetraethyl silicate	Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020). 8 hours: 5 ppm 8 hours. 8 hours: 44 mg/m ³ 8 hours.
n-Butyl acetate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.

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tetraethyl silicate	Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021). TWA: 241 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours.
Propan-1-ol	Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021). TWA: 10 mg/m ³ 8 hours.
tetraethyl silicate	Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022). TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 723 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes.
Propan-1-ol	Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022). [propanol, all isomers] TWA: 350 mg/m ³ 8 hours. TWA: 150 ppm 8 hours. STEL: 600 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes.
tetraethyl silicate	Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 241 mg/m ³ 8 hours.
tetraethyl silicate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
tetraethyl silicate	Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). OEL, 8-h TWA: 44 mg/m ³ 8 hours. OEL, 8-h TWA: 5 ppm 8 hours.
n-Butyl acetate	Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). OEL, 8-h TWA: 241 mg/m ³ 8 hours. STEL, 15-min: 723 mg/m ³ 15 minutes. STEL, 15-min: 150 ppm 15 minutes. OEL, 8-h TWA: 50 ppm 8 hours.
tetraethyl silicate	FOR-2011-12-06-1358 (Norway, 12/2022). Notes: indicative limit value TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	FOR-2011-12-06-1358 (Norway, 12/2022). STEL: 723 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. FOR-2011-12-06-1358 (Norway, 12/2022). Notes: indicative limit value

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Propan-1-ol	TWA: 241 mg/m³ 8 hours. TWA: 50 ppm 8 hours. FOR-2011-12-06-1358 (Norway, 12/2022). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 245 mg/m³ 8 hours.
tetraethyl silicate	Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021).
n-Butyl acetate	TWA: 44 mg/m³ 8 hours. Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021).
Propan-1-ol	TWA: 240 mg/m³ 8 hours. STEL: 720 mg/m³ 15 minutes. Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021). Absorbed through skin.
tetraethyl silicate	TWA: 200 mg/m³ 8 hours. STEL: 600 mg/m³ 15 minutes. Portuguese Institute of Quality (Portugal, 11/2014).
n-Butyl acetate	TWA: 10 ppm 8 hours. Portuguese Institute of Quality (Portugal, 11/2014).
Propan-1-ol	TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes. Portuguese Institute of Quality (Portugal, 11/2014).
tetraethyl silicate	TWA: 100 ppm 8 hours. HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).
n-Butyl acetate	VLA: 44 mg/m³ 8 hours. VLA: 5 ppm 8 hours. HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).
Propan-1-ol	VLA: 241 mg/m³ 8 hours. VLA: 50 ppm 8 hours. Short term: 723 mg/m³ 15 minutes. Short term: 150 ppm 15 minutes. HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).
tetraethyl silicate	VLA: 200 mg/m³ 8 hours. VLA: 81 ppm 8 hours. Short term: 500 mg/m³ 15 minutes. Short term: 203 ppm 15 minutes. Government regulation SR c. 355/2006 (Slovakia, 9/2020).
n-Butyl acetate	TWA: 44 mg/m³ 8 hours. TWA: 5 ppm 8 hours. Government regulation SR c. 355/2006 (Slovakia, 9/2020). [Butyl acetates] TWA: 241 mg/m³, (Butyl acetates) 8 hours. TWA: 50 ppm, (Butyl acetates) 8 hours. STEL: 723 mg/m³, (Butyl acetates) 15 minutes. STEL: 150 ppm, (Butyl acetates) 15 minutes.

SECTION 8: Exposure controls/personal protection

tetraethyl silicate	Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). TWA: 44 mg/m ³ 8 hours. TWA: 5 ppm 8 hours. KTV: 44 mg/m ³ , 4 times per shift, 15 minutes. KTV: 5 ppm, 4 times per shift, 15 minutes.
n-Butyl acetate	Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. KTV: 723 mg/m ³ , 4 times per shift, 15 minutes. KTV: 150 ppm, 4 times per shift, 15 minutes.
tetraethyl silicate	National institute of occupational safety and health (Spain, 4/2022). TWA: 44 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
n-Butyl acetate	National institute of occupational safety and health (Spain, 4/2022). TWA: 50 ppm 8 hours. TWA: 241 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes.
Propan-1-ol	National institute of occupational safety and health (Spain, 4/2022). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours. STEL: 400 ppm 15 minutes. STEL: 1000 mg/m ³ 15 minutes.
tetraethyl silicate	Work environment authority Regulation 2018:1 (Sweden, 9/2021). STEL: 86 mg/m ³ 15 minutes. STEL: 10 ppm 15 minutes. TWA: 44 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
n-Butyl acetate	Work environment authority Regulation 2018:1 (Sweden, 9/2021). [butyl acetate] TWA: 50 ppm 8 hours. TWA: 241 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes.
Propan-1-ol	Work environment authority Regulation 2018:1 (Sweden, 9/2021). TWA: 150 ppm 8 hours. TWA: 350 mg/m ³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 600 mg/m ³ 15 minutes.
tetraethyl silicate	SUVA (Switzerland, 1/2023). TWA: 5 ppm 8 hours. TWA: 44 mg/m ³ 8 hours.
n-Butyl acetate	SUVA (Switzerland, 1/2023). TWA: 50 ppm 8 hours. TWA: 240 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 720 mg/m ³ 15 minutes.
Propan-1-ol	SUVA (Switzerland, 1/2023). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 500 mg/m ³ 8 hours.

SECTION 8: Exposure controls/personal protection

tetraethyl silicate	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 44 mg/m³ 8 hours. TWA: 5 ppm 8 hours.
n-Butyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 966 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 724 mg/m³ 8 hours. TWA: 150 ppm 8 hours.
Propan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 625 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 500 mg/m³ 8 hours. TWA: 200 ppm 8 hours.
2-Methoxy-1-methylethyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 548 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 274 mg/m³ 8 hours. STEL: 100 ppm 15 minutes.
1,2,4-trimethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [trimethylbenzenes, all isomers or mixtures] TWA: 25 ppm 8 hours. TWA: 125 mg/m³ 8 hours.

Biological exposure indices

[illegible]

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	Type	Exposure	Value	Population	Effects
tetraethyl silicate	DNEL	Short term Dermal	3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	14 mg/m ³	General population	Local
	DNEL	Long term Inhalation	14 mg/m ³	General population	Local
	DNEL	Short term Inhalation	14 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	14 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	56 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	56 mg/kg bw/day	Workers	Systemic
n-Butyl acetate	DNEL	Short term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	35.7 mg/m ³	General population	Local
	DNEL	Short term Inhalation	300 mg/m ³	General population	Local
	DNEL	Short term Inhalation	300 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	300 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	600 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	600 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12 mg/m ³	General population	Systemic

SECTION 8: Exposure controls/personal protection

Propan-1-ol	DNEL	Long term Inhalation	48 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	61 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	80 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	81 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	136 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	268 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	1036 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	1723 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
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, 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. 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): 4H / Silver Shield® gloves.

SECTION 8: Exposure controls/personal protection

- 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** : Yellow.
- Odour** : Slight
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
Propan-1-ol	97	206.6	OECD 103
n-Butyl acetate	126	258.8	

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

Ingredient name	°C	°F	Method
Propan-1-ol	400	752	DIN 51794
n-Butyl acetate	415	779	EU A.15

- 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** :

SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Propan-1-ol	21.15146	2.8	DIN EN 13016-2			
n-Butyl acetate	11.25096	1.5				

Relative density : Not available.
Density : 1.5 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.

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
tetraethyl silicate	LD50 Oral	Rat	6270 mg/kg	-
	LC50 Inhalation Vapour	Rat	0.74 mg/l	4 hours
n-Butyl acetate	LD50 Dermal	Rabbit	14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
	LD50 Dermal	Rabbit	5040 mg/kg	-
	LD50 Oral	Rat	1870 mg/kg	-

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

Acute toxicity estimates

Route	ATE value
Inhalation (vapours)	73.24 mg/l

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
tetraethyl silicate	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Severe irritant	Guinea pig	-	2 hours 2500 ppm	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
n-Butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Propan-1-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Human	-	47 hours 100 %	-
	Skin - Mild irritant	Human	-	24 hours 100 %	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

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

Sensitisation

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

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)

Product/ingredient name	Category	Route of exposure	Target organs
tetraethyl silicate	Category 3	-	Respiratory tract irritation
n-Butyl acetate	Category 3	-	Narcotic effects
Propan-1-ol	Category 3	-	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 : No known significant effects or critical hazards.
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

SECTION 11: Toxicological information

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

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
✓ Butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - <i>Artemia salina</i>	48 hours
	Acute LC50 18000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
Propan-1-ol	Acute EC50 4480000 µg/l Fresh water	Algae - <i>Selenastrum sp.</i>	96 hours
	Acute LC50 1000000 µg/l Fresh water	Crustaceans - <i>Gammarus pulex</i>	48 hours
	Acute LC50 2950000 µg/l Fresh water	Daphnia - <i>Daphnia pulex</i>	48 hours
	Acute LC50 3800000 µg/l Marine water	Fish - <i>Alburnus alburnus</i>	96 hours
Trizinc bis(orthophosphate)	Acute EC50 0.32 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours
	Acute EC50 0.96 mg/l	Crustaceans - <i>Ceriodaphnia dubia</i>	48 hours

Conclusion/Summary	: Harmful to aquatic life with long lasting effects.
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12.2 Persistence and degradability

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

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
tetraethyl silicate	3.18	-	Low
n-Butyl acetate	2.3	-	Low
Propan-1-ol	0.2	-	Low
Trizinc bis(orthophosphate)	-	60960	High

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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

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	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3 	3 	3 	3 

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SECTION 14: Transport information

14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Viscous liquid exception** This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.
Tunnel code (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.

IMDG : **Viscous liquid exception** This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.

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]
TEKNONISO COMBI 333-301	≥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 (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

SECTION 15: Regulatory information

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

National regulations

Austria

VbF class : A II
Very dangerous flammable liquid.

Limitation of the use of organic solvents : Permitted.

Czech Republic

Storage code : II

Denmark

Product registration number : 4549499

Danish fire class : II-1

MAL-code : 00-2

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: 00-2

Application: When spraying in existing* spray booths, if the operator is outside the spray zone.

- Arm protectors must be worn.

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 half mask, eye protection, coveralls 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.

SECTION 15: Regulatory information

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

Finland

France

Social Security Code, Articles L 461-1 to L 461-7 : n-Butyl acetate RG 84
Propan-1-ol 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

Hazard class for water : 3

Technical instruction on air quality control : TA-Luft Class I - Number 5.2.5: 15%
TA-Luft Number 5.2.5: 11.7%
TA-Luft Class III - Number 5.2.2: 10.6%

Italy

D.Lgs. 152/06 : Not determined.

Netherlands

Water Discharge Policy (ABM) : A(3) Hazardous for aquatic organisms, may have long-term hazardous effects in aquatic environment. Decontamination effort: A

Norway

Sweden

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

Switzerland

VOC content : VOC (w/w): 11.7%

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 Eye Dam. 1, H318 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very 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]

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 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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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.

