

# SAFETY DATA SHEET



VARIVA AQUA 8771-00 SPRAY

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

### 1.1 Product identifier

**Product name** : VARIVA AQUA 8771-00 SPRAY

### 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. 2, H225

Eye Irrit. 2, H319

STOT SE 3, H336

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** : H225 - Highly flammable liquid and vapour.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.

#### 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.  
P261 - Avoid breathing vapour.

**Response** : P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

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

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

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**Label No** :34498

## SECTION 2: Hazards identification

- Hazardous ingredients** : Contains: acetone
- Supplemental label elements** : Repeated exposure may cause skin dryness or cracking.
- 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
acetone	REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≥50 - ≤75	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	EUH066: C ≥ 25%	[1] [2]
2-(2-butoxyethoxy)ethanol	REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8	≤5	Eye Irrit. 2, H319	-	[1] [2]
Dipropyleneglycolmethylether	REACH #: 01-2119450011-60 EC: 252-104-2 CAS: 34590-94-8	≤5	Not classified.  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[2]

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

#### Type

- [1] Substance classified with a health or environmental hazard  
[2] Substance with a workplace exposure limit

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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

## SECTION 4: First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or 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.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use 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

## SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : Highly 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.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing 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).

### 6.3 Methods and material for containment and cleaning up

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

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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
acetone	<b>Regulation on Limit Values - MAC (Austria, 4/2021).</b> TWA: 500 ppm 8 hours. TWA: 1200 mg/m <sup>3</sup> 8 hours. PEAK: 2000 ppm, 4 times per shift, 15 minutes. PEAK: 4800 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Regulation on Limit Values - MAC (Austria, 4/2021).</b> TWA: 10 ppm 8 hours. TWA: 67.5 mg/m <sup>3</sup> 8 hours. PEAK: 15 ppm, 4 times per shift, 15 minutes. PEAK: 101.2 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.
Dipropyleneglycolmethylether	<b>Regulation on Limit Values - MAC (Austria, 4/2021).</b> <b>[Dipropylene glycol monomethyl ethers (mixture of isomers)]</b> <b>Absorbed through skin.</b>

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**Label No** : 34498

## SECTION 8: Exposure controls/personal protection

acetone	<p>TWA: 50 ppm 8 hours. TWA: 307 mg/m<sup>3</sup> 8 hours. CEIL: 100 ppm, 8 times per shift, 5 minutes. CEIL: 614 mg/m<sup>3</sup>, 8 times per shift, 5 minutes.</p> <p><b>Limit values (Belgium, 5/2021).</b> TWA: 246 ppm 8 hours. TWA: 594 mg/m<sup>3</sup> 8 hours. STEL: 492 ppm 15 minutes. STEL: 1187 mg/m<sup>3</sup> 15 minutes.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Limit values (Belgium, 5/2021).</b> STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours. TWA: 67.5 mg/m<sup>3</sup> 8 hours. STEL: 101.2 mg/m<sup>3</sup> 15 minutes.</p>
Dipropyleneglycolmethylether	<p><b>Limit values (Belgium, 5/2021).</b> <b>[Dipropyleenglycolmonomethylether] Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m<sup>3</sup> 8 hours.</p>
acetone	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021).</b> Limit value 8 hours: 600 mg/m<sup>3</sup> 8 hours. Limit value 15 min: 1400 mg/m<sup>3</sup> 15 minutes.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021).</b> Limit value 8 hours: 67.5 mg/m<sup>3</sup> 8 hours. Limit value 15 min: 101.2 mg/m<sup>3</sup> 15 minutes. Limit value 15 min: 15 ppm 15 minutes. Limit value 8 hours: 10 ppm 8 hours.</p>
Dipropyleneglycolmethylether	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). [2-(Methoxymethyletoxy)propanol] Absorbed through skin.</b> Limit value 8 hours: 308 mg/m<sup>3</sup> 8 hours. Limit value 8 hours: 50 ppm 8 hours.</p>
acetone	<p><b>Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021).</b> ELV: 1210 mg/m<sup>3</sup> 8 hours. ELV: 500 ppm 8 hours.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021).</b> STELV: 101.2 mg/m<sup>3</sup> 15 minutes. STELV: 15 ppm 15 minutes. ELV: 67.5 mg/m<sup>3</sup> 8 hours. ELV: 10 ppm 8 hours.</p>
Dipropyleneglycolmethylether	<p><b>Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). [(2-methoxymethylethoxy)-propanol] Absorbed through skin.</b> ELV: 308 mg/m<sup>3</sup> 8 hours. ELV: 50 ppm 8 hours.</p>
acetone	<p><b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m<sup>3</sup> 8 hours.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Department of labour inspection (Cyprus, 7/2021).</b> STEL: 15 ppm 15 minutes. STEL: 101.2 mg/m<sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. TWA: 67.5 mg/m<sup>3</sup> 8 hours.</p>
Dipropyleneglycolmethylether	<p><b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m<sup>3</sup> 8 hours.</p>

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acetone	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022).</b> TWA: 800 mg/m <sup>3</sup> 8 hours. STEL: 1500 mg/m <sup>3</sup> 15 minutes. STEL: 621 ppm 15 minutes. TWA: 331.2 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022).</b> TWA: 70 mg/m <sup>3</sup> 8 hours. TWA: 10.36 ppm 8 hours. STEL: 100 mg/m <sup>3</sup> 15 minutes. STEL: 14.8 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). [(2-methoxymethylethoxy)-propanol (mixture of isomers)] Absorbed through skin.</b> TWA: 270 mg/m <sup>3</sup> 8 hours. TWA: 43.74 ppm 8 hours. STEL: 550 mg/m <sup>3</sup> 15 minutes. STEL: 89.1 ppm 15 minutes.
acetone	<b>Working Environment Authority (Denmark, 6/2022).</b> TWA: 250 ppm 8 hours. TWA: 600 mg/m <sup>3</sup> 8 hours. STEL: 1200 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Working Environment Authority (Denmark, 6/2022).</b> TWA: 68 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. STEL: 101 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>Working Environment Authority (Denmark, 6/2022). [Dipropylenglycolmethylether] Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 309 mg/m <sup>3</sup> 8 hours. STEL: 618 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes.
acetone	<b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022).</b> TWA: 1210 mg/m <sup>3</sup> 8 hours. TWA: 500 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022).</b> TWA: 10 ppm 8 hours. TWA: 67.5 mg/m <sup>3</sup> 8 hours.
Dipropyleneglycolmethylether	<b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). [Dipropylene glycol monomethyl ether] Absorbed through skin.</b> TWA: 308 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
acetone	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>EU OEL (Europe, 1/2022). [(2-Methoxymethylethoxy)-propanol] Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.

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acetone	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021).</b> TWA: 500 ppm 8 hours. TWA: 1200 mg/m <sup>3</sup> 8 hours. STEL: 630 ppm 15 minutes. STEL: 1500 mg/m <sup>3</sup> 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021).</b> TWA: 10 ppm 8 hours. TWA: 68 mg/m <sup>3</sup> 8 hours.
Dipropyleneglycolmethylether	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). [(2-Methoxymethylethoxy)propanol]</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 310 mg/m <sup>3</sup> 8 hours.
acetone	<b>Ministry of Labor (France, 10/2022). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours. STEL: 2420 mg/m <sup>3</sup> 15 minutes. STEL: 1000 ppm 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Ministry of Labor (France, 10/2022). Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)</b> STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
Dipropyleneglycolmethylether	<b>Ministry of Labor (France, 10/2022). [(2-methoxymethylethoxy)-propanol] Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.
acetone	<b>TRGS 900 OEL (Germany, 6/2022).</b> TWA: 1200 mg/m <sup>3</sup> 8 hours. PEAK: 2400 mg/m <sup>3</sup> 15 minutes. TWA: 500 ppm 8 hours. PEAK: 1000 ppm 15 minutes. <b>DFG MAC-values list (Germany, 7/2022).</b> TWA: 500 ppm 8 hours. PEAK: 1000 ppm, 4 times per shift, 15 minutes. TWA: 1200 mg/m <sup>3</sup> 8 hours. PEAK: 2400 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>TRGS 900 OEL (Germany, 6/2022).</b> TWA: 67 mg/m <sup>3</sup> 8 hours. PEAK: 100.5 mg/m <sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. PEAK: 15 ppm 15 minutes. <b>DFG MAC-values list (Germany, 7/2022).</b> TWA: 67 mg/m <sup>3</sup> 8 hours. PEAK: 100.5 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. TWA: 10 ppm 8 hours. PEAK: 15 ppm, 4 times per shift, 15 minutes.
Dipropyleneglycolmethylether	<b>TRGS 900 OEL (Germany, 6/2022). [(2-Methoxymethylethoxy)propanol]</b> TWA: 310 mg/m <sup>3</sup> 8 hours. PEAK: 310 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. PEAK: 50 ppm 15 minutes. <b>DFG MAC-values list (Germany, 7/2022). [Dipropylene glycol monomethyl ether (mixture of isomers)]</b> TWA: 50 ppm 8 hours. PEAK: 50 ppm, 4 times per shift, 15 minutes. TWA: 310 mg/m <sup>3</sup> 8 hours. PEAK: 310 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.



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acetone	<b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021).</b> TWA: 1780 mg/m <sup>3</sup> 8 hours. STEL: 3560 mg/m <sup>3</sup> 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021).</b> STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
Dipropyleneglycolmethylether	<b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). [(2-Methoxymethylethoxy)propanol] Absorbed through skin.</b> TWA: 100 ppm 8 hours. TWA: 600 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 900 mg/m <sup>3</sup> 15 minutes.
acetone	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Skin sensitiser. Inhalation sensitiser.</b> TWA: 1210 mg/m <sup>3</sup> 8 hours. TWA: 500 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022).</b> TWA: 67.5 mg/m <sup>3</sup> 8 hours. PEAK: 101.2 mg/m <sup>3</sup> 15 minutes. PEAK: 15 ppm 15 minutes. TWA: 10 ppm 8 hours.
Dipropyleneglycolmethylether	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). [Dipropylene glycol monomethyl ether]</b> TWA: 308 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
acetone	<b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021).</b> TWA: 600 mg/m <sup>3</sup> 8 hours. TWA: 250 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021).</b> STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
Dipropyleneglycolmethylether	<b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). [dipropylene glycol methyl ether] Absorbed through skin.</b> TWA: 300 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
acetone	<b>NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 500 ppm 8 hours. OELV-8hr: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 10 ppm 8 hours. OELV-15min: 101.2 mg/m <sup>3</sup> 15 minutes. OELV-8hr: 67.5 mg/m <sup>3</sup> 8 hours. OELV-15min: 15 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>NAOSH (Ireland, 5/2021). [(2-methoxymethylethoxy)-1-propanol] Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 50 ppm 8 hours. OELV-8hr: 308 mg/m <sup>3</sup> 8 hours.

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acetone	<b>Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020).</b> 8 hours: 500 ppm 8 hours. 8 hours: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020).</b> 8 hours: 10 ppm 8 hours. 8 hours: 67.5 mg/m <sup>3</sup> 8 hours. Short Term: 15 ppm 15 minutes. Short Term: 101.2 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020).</b> <b>Absorbed through skin.</b> 8 hours: 50 ppm 8 hours. 8 hours: 308 mg/m <sup>3</sup> 8 hours.
acetone	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> TWA: 1210 mg/m <sup>3</sup> 8 hours. TWA: 500 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> STEL: 101.2 mg/m <sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m <sup>3</sup> 8 hours.
Dipropyleneglycolmethylether	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>[Methoxy propoxy propanols] Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.
acetone	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b> TWA: 1210 mg/m <sup>3</sup> 8 hours. TWA: 500 ppm 8 hours. STEL: 2420 mg/m <sup>3</sup> 15 minutes. STEL: 1000 ppm 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b> TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b> <b>Absorbed through skin.</b> TWA: 308 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. STEL: 450 mg/m <sup>3</sup> 15 minutes. STEL: 75 ppm 15 minutes.
acetone	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021).</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin.</b> STEL: 15 ppm 15 minutes. STEL: 101.2 mg/m <sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. TWA: 67.5 mg/m <sup>3</sup> 8 hours.
Dipropyleneglycolmethylether	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). [(2-methoxymethylethoxy)-propanol]</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.

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acetone	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. STEL: 101.2 mg/m <sup>3</sup> 15 minutes. STEL: 15 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>EU OEL (Europe, 1/2022). [(2-Methoxymethylethoxy)-propanol] Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.
acetone	<b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b> STEL,15-min: 2420 mg/m <sup>3</sup> 15 minutes. OEL, 8-h TWA: 1210 mg/m <sup>3</sup> 8 hours. OEL, 8-h TWA: 500 ppm 8 hours. STEL,15-min: 1000 ppm 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). Absorbed through skin.</b> OEL, 8-h TWA: 50 mg/m <sup>3</sup> 8 hours. STEL,15-min: 100 mg/m <sup>3</sup> 15 minutes. OEL, 8-h TWA: 7.4 ppm 8 hours. STEL,15-min: 14.8 ppm 15 minutes.
Dipropyleneglycolmethylether	<b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). [dipropylene glycolmethylether]</b> OEL, 8-h TWA: 300 mg/m <sup>3</sup> 8 hours. OEL, 8-h TWA: 48.7 ppm 8 hours.
acetone	<b>FOR-2011-12-06-1358 (Norway, 12/2022). Notes: indicative limit value</b> TWA: 125 ppm 8 hours. TWA: 295 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>FOR-2011-12-06-1358 (Norway, 12/2022). Notes: indicative limit value</b> TWA: 10 ppm 8 hours. TWA: 68 mg/m <sup>3</sup> 8 hours.
Dipropyleneglycolmethylether	<b>FOR-2011-12-06-1358 (Norway, 12/2022). [Dipropylene glycol methyl ether] Absorbed through skin. Notes: indicative limit value</b> TWA: 50 ppm 8 hours. TWA: 300 mg/m <sup>3</sup> 8 hours.
acetone	<b>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).</b> TWA: 600 mg/m <sup>3</sup> 8 hours. STEL: 1800 mg/m <sup>3</sup> 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>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).</b> TWA: 67 mg/m <sup>3</sup> 8 hours. STEL: 100 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>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). [dipropylene glycol methyl ether] Absorbed through</b>

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acetone	<p>skin. TWA: 240 mg/m<sup>3</sup> 8 hours. STEL: 480 mg/m<sup>3</sup> 15 minutes.</p> <p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor</p>
Dipropyleneglycolmethylether	<p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b> <b>[2-Metoximetiletoxipropanol] Absorbed through skin.</b> TWA: 100 ppm 8 hours. STEL: 150 ppm 15 minutes.</p>
acetone	<p><b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).</b> VLA: 1210 mg/m<sup>3</sup> 8 hours. VLA: 500 ppm 8 hours.</p>
2-(2-butoxyethoxy)ethanol	<p><b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).</b> VLA: 67.5 mg/m<sup>3</sup> 8 hours. Short term: 101.2 mg/m<sup>3</sup> 15 minutes. Short term: 15 ppm 15 minutes. VLA: 10 ppm 8 hours.</p>
Dipropyleneglycolmethylether	<p><b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021). Absorbed through skin.</b> VLA: 308 mg/m<sup>3</sup> 8 hours. VLA: 50 ppm 8 hours.</p>
acetone	<p><b>Government regulation SR c. 355/2006 (Slovakia, 9/2020).</b> TWA: 1210 mg/m<sup>3</sup> 8 hours. TWA: 500 ppm 8 hours.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Government regulation SR c. 355/2006 (Slovakia, 9/2020).</b> TWA: 67.5 mg/m<sup>3</sup> 8 hours. STEL: 101.2 mg/m<sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.</p>
Dipropyleneglycolmethylether	<p><b>Government regulation SR c. 355/2006 (Slovakia, 9/2020).</b> <b>[2-methoxymetyl-ethoxypropanol] Absorbed through skin.</b> TWA: 308 mg/m<sup>3</sup>, (2-methoxymetyl-ethoxypropanol) 8 hours. TWA: 50 ppm, (2-methoxymetyl-ethoxypropanol) 8 hours.</p>
acetone	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 1210 mg/m<sup>3</sup> 8 hours. TWA: 500 ppm 8 hours. KTV: 1000 ppm, 4 times per shift, 15 minutes. KTV: 2420 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.</p>
2-(2-butoxyethoxy)ethanol	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 67.5 mg/m<sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. KTV: 101.2 mg/m<sup>3</sup>, 4 times per shift, 15 minutes. KTV: 15 ppm, 4 times per shift, 15 minutes.</p>
Dipropyleneglycolmethylether	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). [ (2-methoxymethylethoxy)propanol (mixture of isomers)] Absorbed through skin.</b> TWA: 308 mg/m<sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. KTV: 50 ppm, 4 times per shift, 15 minutes. KTV: 308 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.</p>

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acetone	<b>National institute of occupational safety and health (Spain, 4/2022).</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>National institute of occupational safety and health (Spain, 4/2022).</b> TWA: 67.5 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. STEL: 101.2 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>National institute of occupational safety and health (Spain, 4/2022).</b> [Dipropylene glycol methyl ether] Absorbed through skin. TWA: 50 ppm 8 hours. TWA: 308 mg/m <sup>3</sup> 8 hours.
acetone	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021).</b> TWA: 250 ppm 8 hours. TWA: 600 mg/m <sup>3</sup> 8 hours. STEL: 500 ppm 15 minutes. STEL: 1200 mg/m <sup>3</sup> 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021).</b> TWA: 10 ppm 8 hours. TWA: 68 mg/m <sup>3</sup> 8 hours. STEL: 15 ppm 15 minutes. STEL: 101 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021).</b> [dipropylene glycol monomethyl ether] Absorbed through skin. TWA: 50 ppm 8 hours. TWA: 300 mg/m <sup>3</sup> 8 hours. STEL: 75 ppm 15 minutes. STEL: 450 mg/m <sup>3</sup> 15 minutes.
acetone	<b>SUVA (Switzerland, 1/2023).</b> TWA: 500 ppm 8 hours. TWA: 1200 mg/m <sup>3</sup> 8 hours. STEL: 1000 ppm 15 minutes. STEL: 2400 mg/m <sup>3</sup> 15 minutes.
2-(2-butoxyethoxy)ethanol	<b>SUVA (Switzerland, 1/2023).</b> TWA: 67 mg/m <sup>3</sup> 8 hours. Form: vapour and aerosols STEL: 101 mg/m <sup>3</sup> 15 minutes. Form: vapour and aerosols STEL: 15 ppm 15 minutes. Form: vapour and aerosols TWA: 10 ppm 8 hours. Form: vapour and aerosols
Dipropyleneglycolmethylether	<b>SUVA (Switzerland, 1/2023).</b> [Dipropylene glycol methyl ether (mixture of isomers)] STEL: 50 ppm 15 minutes. Form: vapour and aerosols STEL: 300 mg/m <sup>3</sup> 15 minutes. Form: vapour and aerosols TWA: 50 ppm 8 hours. Form: vapour and aerosols TWA: 300 mg/m <sup>3</sup> 8 hours. Form: vapour and aerosols
acetone	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 3620 mg/m <sup>3</sup> 15 minutes. STEL: 1500 ppm 15 minutes. TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours.
2-(2-butoxyethoxy)ethanol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m <sup>3</sup> 8 hours. STEL: 101.2 mg/m <sup>3</sup> 15 minutes.
Dipropyleneglycolmethylether	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> Absorbed through skin. TWA: 308 mg/m <sup>3</sup> 8 hours.

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TWA: 50 ppm 8 hours.

### Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
No exposure indices known.	
acetone	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021)</b> BLV: 80 mg/l, acetone [in urine]. Sampling time: after the end of the exposure or the end of the work shift.
acetone	<b>Ministry of Economy, Labour and Entrepreneurship ILV/STEL (Croatia, 10/2018)</b> BEI: 20 mg/g creatinine, acetone [in urine]. Sampling time: at the end of the work shift. BEI: 39 mmol/mol creatinine, acetone [in urine]. Sampling time: at the end of the work shift. BEI: 20 mg/l, acetone [in blood]. Sampling time: at the end of the work shift. BEI: 0.34 mmol/l, acetone [in blood]. Sampling time: at the end of the work shift.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
acetone	<b>DFG BEI-values list (Germany, 7/2022)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift. <b>TRGS 903 - BEI Values (Germany, 2/2022)</b> BEI: 80 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.
No exposure indices known.	
acetone	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022)</b> BEI: 1380 µmol/l, acetone [in urine]. Sampling time: at the end of the shift. BEI: 80 mg/l, acetone [in urine]. Sampling time: at the end of the shift.
No exposure indices known.	
acetone	<b>NAOSH (Ireland, 1/2011)</b> BMGV: 50 mg/l, acetone [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
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.	
acetone	<b>Portuguese Institute of Quality (Portugal, 11/2014)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: end of shift.

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acetone	<b>HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2020)</b> OBLV: 50 mg/l, acetone [in urine]. Sampling time: end of shift.
acetone	<b>Government regulation SR c. 355/2006 (Slovakia, 9/2020)</b> BLV: 103.9 µmol/mmol creatinine, acetone [in urine]. Sampling time: at the end of exposure or work shift. BLV: 53.36 mg/g creatinine, acetone [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1378 µmol/l, acetone [in urine]. Sampling time: at the end of exposure or work shift. BLV: 80 mg/l, acetone [in urine]. Sampling time: at the end of exposure or work shift.
acetone	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> BAT: 80 mg/l, acetone [in urine]. Sampling time: at the end of the work shift.
acetone	<b>National institute of occupational safety and health (Spain, 4/2022)</b> VLB: 50 mg/l, acetone [in urine]. Sampling time: end of shift.
No exposure indices known.	
acetone	<b>SUVA (Switzerland, 1/2023)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: immediately after exposure or after working hours. BEI: 0.86 mmol/l, acetone [in urine]. Sampling time: immediately after exposure or after working hours.
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
acetone	DNEL	Long term Oral	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	186 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	200 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	1210 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	2420 mg/m <sup>3</sup>	Workers	Local
2-(2-butoxyethoxy)ethanol	DNEL	Long term Oral	6.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	67.5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	101.2 mg/m <sup>3</sup>	Workers	Local
Dipropyleneglycolmethylether	DNEL	Long term Oral	36 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	37.2 mg/m <sup>3</sup>	General population	Systemic

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	DNEL	Long term Dermal	121 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	283 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	308 mg/m <sup>3</sup>	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.

### 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.

#### **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.

#### **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

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Various
<b>Odour</b>	: Slight
<b>Odour threshold</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Initial boiling point and boiling range</b>	:

Ingredient name	°C	°F	Method
acetone	56.05	132.9	
water	100	212	

<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit</b>	: Lower: 0.8% Upper: 14%
<b>Flash point</b>	: Closed cup: -19°C (-2.2°F)
<b>Auto-ignition temperature</b>	:

Ingredient name	°C	°F	Method
Dipropyleneglycolmethylether	207	404.6	EU A.15
2-(2-butoxyethoxy)ethanol	210	410	DIN 51794

<b>Decomposition temperature</b>	: Not available.
<b>pH</b>	: 7 to 9 [Conc. (% w/w): 100%]
<b>Viscosity</b>	: Not available.
<b>Solubility(ies)</b>	:
Not available.	
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/ water</b>	: Not applicable.
<b>Vapour pressure</b>	:

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
acetone	180.01463	24				
water	17.5	2.3				

<b>Relative density</b>	: Not available.
<b>Density</b>	: 0.9 g/cm <sup>3</sup>
<b>Vapour density</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: 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
acetone 2-(2-butoxyethoxy)ethanol	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-

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

#### Acute toxicity estimates

Route	ATE value
Not available.	

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
Dipropyleneglycolmethylether	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Eyes - Mild irritant	Human	-	8 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	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.

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### 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
acetone	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 irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : No specific data.

### 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** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : No known significant effects or critical hazards.

## SECTION 11: Toxicological information

- 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
acetone	Acute EC50 20.565 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - <i>Gammarus pulex</i>	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - <i>Poecilia reticulata</i>	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - <i>Daphniidae</i>	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - <i>Gasterosteus aculeatus</i> - Larvae	42 days
	2-(2-butoxyethoxy)ethanol	Acute LC50 1300000 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i>

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

### 12.2 Persistence and degradability

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

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
acetone	-0.23	-	Low
2-(2-butoxyethoxy)ethanol	1	-	Low
Dipropyleneglycolmethylether	0.004	-	Low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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)** : 08.01.11

#### 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>	UN1090	UN1993	UN1993	UN1993
<b>14.2 UN proper shipping name</b>	mixture	FLAMMABLE LIQUID, N.O.S. (acetone)	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
<b>14.3 Transport hazard class(es)</b>	3 	3 	3  	3 
<b>14.4 Packing group</b>	II	II	II	II
<b>14.5 Environmental hazards</b>	No.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

#### Additional information

**ADN** : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

**Special provisions** 640 (C)

**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]
VARIVA AQUA 8771-00 SPRAY	≥90	3
2-(2-butoxyethoxy)ethanol	≤5	55 [Consumer paint]

Labelling :

#### Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : 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

Not listed.

#### Seveso Directive

This product is controlled under the Seveso Directive.

##### Danger criteria

Category
P5c

#### National regulations

##### Austria

VbF class : A I  
Very dangerous flammable liquid.

Limitation of the use of organic solvents : Permitted.

##### Czech Republic

Storage code : I

##### Denmark

Danish fire class : I-1

MAL-code : 3-1

## SECTION 15: Regulatory information

**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, respiratory protection with air supply and arm protectors/apron/coveralls/protective clothing must be worn as appropriate or as instructed.

MAL-code: 3-1

**Application:** When spraying in new\* 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 half mask and eye protection must be worn.

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

- Air-supplied full mask and arm protectors 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.

- Air-supplied full mask 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 full mask, 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.

**Low-boiling liquids** : This product contains low-boiling point liquids. Any respiratory protective equipment should be air-fed.

**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](#)

## SECTION 15: Regulatory information

**Social Security Code, Articles L 461-1 to L 461-7** : acetone  
2-(2-butoxyethoxy)ethanol  
Dipropyleneglycolmethylether  
RG 84  
RG 84  
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** : 1

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 56.5%

**AOX** : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

### Italy

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

### Netherlands

**Water Discharge Policy (ABM)** : A(1) Highly toxic for aquatic organisms, may have long-term hazardous effects in aquatic environment. Decontamination effort: A

### Norway

### Sweden

**Flammable liquid class (SRVFS 2005:10)** : 1

### Switzerland

**VOC content** : VOC (w/w): 56%

### 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.



## SECTION 16: Other information

### Abbreviations and acronyms

: ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
N/A = Not available  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number  
SGG = Segregation Group  
vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	On basis of test data Calculation method Calculation method

### Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

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

Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 01/03/2024

**Date of previous issue** : No previous validation

**Version** : 1

VARIVA AQUA 8771-00 SPRAY

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.

