

# SAFETY DATA SHEET



AC EMAILLACK FM 3021-15 - All variants

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

### 1.1 Product identifier

**Product name** : AC EMAILLACK FM 3021-15 - All variants

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

**Product use** : Paint.

### 1.3 Details of the supplier of the safety data sheet

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

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

#### National contact

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

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

**Telephone number** : In an emergency, call 112

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225

Eye Dam. 1, H318

Skin Sens. 1, H317

Carc. 1B, H350

STOT SE 3, H336

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : 27.6 percent of the mixture consists of component(s) of unknown acute oral toxicity  
27.6 percent of the mixture consists of component(s) of unknown acute dermal toxicity  
27.6 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

**Ingredients of unknown ecotoxicity** : Contains 27.6% of components with unknown hazards to the aquatic environment

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

## SECTION 2: Hazards identification

<b>Hazard statements</b>	: H225 - Highly flammable liquid and vapour. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness. H350 - May cause cancer.
<b>Precautionary statements</b>	
<b>Prevention</b>	: P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Response</b>	: P308 + P313 - IF exposed or concerned: Get medical advice or attention.
<b>Storage</b>	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Contains: n-Butyl acetate; Methylisobutylketone; iso-butanol and Formaldehyde
<b>Supplemental label elements</b>	:
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Restricted to professional users.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
n-Butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Methylisobutylketone	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≥10 - ≤25	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
1-Methoxy 2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≤10	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
iso-butanol	REACH #: 01-2119484609-23 EC: 201-148-0	≤7.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318	-	[1]

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## SECTION 3: Composition/information on ingredients

acetone	CAS: 78-83-1 Index: 603-108-00-1  REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≤10	STOT SE 3, H335 STOT SE 3, H336  Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	EUH066: C ≥ 25%	[1] [2]
Butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤2.8	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	ATE [Oral] = 790 mg/kg	[1]
2-Methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤3	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	-	[1] [2]
Formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	≤0.3	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335  <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Oral] = 100 mg/kg ATE [Dermal] = 300 mg/kg ATE [Inhalation (gases)] = 700 ppm Skin Corr. 1B, H314: C ≥ 25% Skin Irrit. 2, H315: 5% ≤ C < 25% Eye Dam. 1, H318: C ≥ 25% Eye Irrit. 2, H319: 5% ≤ C < 25% Skin Sens. 1, H317: C ≥ 0.2% STOT SE 3, H335: C ≥ 5%	[1] [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** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : 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. 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).

### 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.

## SECTION 6: Accidental release measures

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
No exposure limit value known.	
No exposure limit value known.	
No exposure limit value known.	
No exposure limit value known.	
n-Butyl acetate	<b>Department of labour inspection (Cyprus, 7/2021).</b> STEL: 150 ppm 15 minutes. STEL: 723 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 241 mg/m <sup>3</sup> 8 hours.
Methylisobutylketone	<b>Department of labour inspection (Cyprus, 7/2021).</b> STEL: 50 ppm 15 minutes. STEL: 208 mg/m <sup>3</sup> 15 minutes. TWA: 20 ppm 8 hours. TWA: 83 mg/m <sup>3</sup> 8 hours.
1-Methoxy 2-propanol	<b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> STEL: 150 ppm 15 minutes. STEL: 568 mg/m <sup>3</sup> 15 minutes. TWA: 100 ppm 8 hours. TWA: 375 mg/m <sup>3</sup> 8 hours.
acetone	<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.
2-Methoxy-1-methylethyl acetate	<b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> STEL: 100 ppm 15 minutes. STEL: 550 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 275 mg/m <sup>3</sup> 8 hours.
Toluene	<b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> STEL: 100 ppm 15 minutes. STEL: 384 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 192 mg/m <sup>3</sup> 8 hours.
Formaldehyde	<b>EU OEL (Europe, 10/2019). Skin sensitiser.</b> STEL: 0.6 ppm 15 minutes. STEL: 0.74 mg/m <sup>3</sup> 15 minutes. TWA: 0.62 ppm 8 hours. TWA: 0.5 mg/m <sup>3</sup> 8 hours.
No exposure limit value known.	
No exposure limit value known.	
No exposure limit value known.	
n-Butyl acetate	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> STEL: 150 ppm 15 minutes. STEL: 723 mg/m <sup>3</sup> 15 minutes. TWA: 241 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
Methylisobutylketone	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 20 ppm 8 hours. TWA: 83 mg/m <sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 208 mg/m <sup>3</sup> 15 minutes.
1-Methoxy 2-propanol	<b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 100 ppm 8 hours.

## SECTION 8: Exposure controls/personal protection

acetone	<p>TWA: 375 mg/m<sup>3</sup> 8 hours.          STEL: 150 ppm 15 minutes.          STEL: 568 mg/m<sup>3</sup> 15 minutes.</p> <p><b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b></p> <p>TWA: 500 ppm 8 hours.          TWA: 1210 mg/m<sup>3</sup> 8 hours.</p>
2-Methoxy-1-methylethyl acetate	<p><b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b></p> <p>TWA: 50 ppm 8 hours.          TWA: 275 mg/m<sup>3</sup> 8 hours.          STEL: 100 ppm 15 minutes.          STEL: 550 mg/m<sup>3</sup> 15 minutes.</p>
Toluene	<p><b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b></p> <p>TWA: 192 mg/m<sup>3</sup> 8 hours.          TWA: 50 ppm 8 hours.          STEL: 384 mg/m<sup>3</sup> 15 minutes.          STEL: 100 ppm 15 minutes.</p>
Formaldehyde	<p><b>EU OEL (Europe, 10/2019). Skin sensitiser.</b></p> <p>STEL: 0.6 ppm 15 minutes.          STEL: 0.74 mg/m<sup>3</sup> 15 minutes.          TWA: 0.62 ppm 8 hours.          TWA: 0.5 mg/m<sup>3</sup> 8 hours.</p>
No exposure limit value known.	
n-Butyl acetate	<p><b>Ministry of Labor (France, 10/2022). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p> <p>TWA: 50 ppm 8 hours.          TWA: 241 mg/m<sup>3</sup> 8 hours.          STEL: 150 ppm 15 minutes.          STEL: 723 mg/m<sup>3</sup> 15 minutes.</p>
Methylisobutylketone	<p><b>Ministry of Labor (France, 10/2022). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p> <p>TWA: 20 ppm 8 hours.          TWA: 83 mg/m<sup>3</sup> 8 hours.          STEL: 208 mg/m<sup>3</sup> 15 minutes.          STEL: 50 ppm 15 minutes.</p>
1-Methoxy 2-propanol	<p><b>Ministry of Labor (France, 10/2022). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p> <p>TWA: 50 ppm 8 hours.          TWA: 188 mg/m<sup>3</sup> 8 hours.          STEL: 375 mg/m<sup>3</sup> 15 minutes.          STEL: 100 ppm 15 minutes.</p>
iso-butanol	<p><b>Ministry of Labor (France, 10/2022). Notes: Permissible limit values (circulars)</b></p> <p>TWA: 50 ppm 8 hours.          TWA: 150 mg/m<sup>3</sup> 8 hours.</p>
acetone	<p><b>Ministry of Labor (France, 10/2022). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p> <p>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.</p>
Butan-1-ol	<p><b>Ministry of Labor (France, 10/2022). Notes: Permissible limit values (circulars)</b></p> <p>STEL: 50 ppm 15 minutes.          STEL: 150 mg/m<sup>3</sup> 15 minutes.</p>
2-Methoxy-1-methylethyl acetate	<p><b>Ministry of Labor (France, 10/2022). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p> <p>STEL: 550 mg/m<sup>3</sup> 15 minutes.          STEL: 100 ppm 15 minutes.          TWA: 275 mg/m<sup>3</sup> 8 hours.</p>



## SECTION 8: Exposure controls/personal protection

Toluene	<p>TWA: 50 ppm 8 hours.  <b>Ministry of Labor (France, 10/2022). Absorbed through skin.</b>  <b>Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b></p>
Formaldehyde	<p>TWA: 20 ppm 8 hours.  TWA: 76.8 mg/m<sup>3</sup> 8 hours.  STEL: 100 ppm 15 minutes.  STEL: 384 mg/m<sup>3</sup> 15 minutes.  <b>Ministry of Labor (France, 10/2022). Skin sensitiser. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b>  TWA: 0.3 ppm 8 hours.  STEL: 0.6 ppm 15 minutes.  TWA: 0.5 ppm 8 hours. Form: the healthcare, funeral directors and embalming sectors  TWA: 0.62 mg/m<sup>3</sup> 8 hours. Form: the healthcare, funeral directors and embalming sectors  STEL: 0.74 mg/m<sup>3</sup> 15 minutes.  TWA: 0.37 mg/m<sup>3</sup> 8 hours.</p>
No exposure limit value known.	
No exposure limit value known.	
No exposure limit value known.	
n-Butyl acetate	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). [butyl acetate, all isomers]</b>  TWA: 241 mg/m<sup>3</sup> 8 hours.  TWA: 50 ppm 8 hours.  STEL: 723 mg/m<sup>3</sup> 15 minutes.  STEL: 150 ppm 15 minutes.</p>
Methylisobutylketone	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  STEL: 208 mg/m<sup>3</sup> 15 minutes.  STEL: 50 ppm 15 minutes.  TWA: 83 mg/m<sup>3</sup> 8 hours.  TWA: 20 ppm 8 hours.</p>
1-Methoxy 2-propanol	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  STEL: 568 mg/m<sup>3</sup> 15 minutes.  STEL: 150 ppm 15 minutes.  TWA: 185 mg/m<sup>3</sup> 8 hours.  TWA: 50 ppm 8 hours.</p>
iso-butanol	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). [butanol, all isomers, except n-butanol] Absorbed through skin.</b>  STEL: 150 mg/m<sup>3</sup> 15 minutes.  STEL: 50 ppm 15 minutes.</p>
acetone	<p><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.</p>
Butan-1-ol	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  STEL: 150 mg/m<sup>3</sup> 15 minutes.  STEL: 50 ppm 15 minutes.  TWA: 80 mg/m<sup>3</sup> 8 hours.  TWA: 25 ppm 8 hours.</p>
2-Methoxy-1-methylethyl acetate	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  STEL: 550 mg/m<sup>3</sup> 15 minutes.  STEL: 100 ppm 15 minutes.  TWA: 275 mg/m<sup>3</sup> 8 hours.  TWA: 50 ppm 8 hours.</p>
Toluene	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  STEL: 188 mg/m<sup>3</sup> 15 minutes.</p>

## SECTION 8: Exposure controls/personal protection

<p>Formaldehyde</p>	<p>STEL: 50 ppm 15 minutes. TWA: 94 mg/m<sup>3</sup> 8 hours. TWA: 25 ppm 8 hours. <b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021).</b> <b>Absorbed through skin.</b> STEL: 0.74 mg/m<sup>3</sup> 15 minutes. STEL: 0.6 ppm 15 minutes. TWA: 0.37 mg/m<sup>3</sup> 8 hours. TWA: 0.3 ppm 8 hours.</p>
<p>No exposure limit value known. No exposure limit value known.</p>	
<p>n-Butyl acetate</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> TWA: 241 mg/m<sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 723 mg/m<sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours.</p>
<p>Methylisobutylketone</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> TWA: 83 mg/m<sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. STEL: 50 ppm 15 minutes. STEL: 208 mg/m<sup>3</sup> 15 minutes.</p>
<p>1-Methoxy 2-propanol</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>Absorbed through skin.</b> TWA: 100 ppm 8 hours. STEL: 568 mg/m<sup>3</sup> 15 minutes. TWA: 375 mg/m<sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes.</p>
<p>iso-butanol</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>[Butylalcohol]</b> TWA: 10 mg/m<sup>3</sup> 8 hours.</p>
<p>acetone</p>	<p><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.</p>
<p>Butan-1-ol</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>[Butylalcohol]</b> TWA: 10 mg/m<sup>3</sup> 8 hours.</p>
<p>2-Methoxy-1-methylethyl acetate</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 275 mg/m<sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 550 mg/m<sup>3</sup> 15 minutes.</p>
<p>Toluene</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>Absorbed through skin.</b> TWA: 50 mg/m<sup>3</sup> 8 hours. STEL: 150 mg/m<sup>3</sup> 15 minutes. TWA: 14 ppm 8 hours. STEL: 40 ppm 15 minutes.</p>
<p>Formaldehyde</p>	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> <b>Skin sensitizer.</b> STEL: 0.5 ppm 15 minutes. Form: For the healthcare, funeral and embalming sectors TWA: 0.62 mg/m<sup>3</sup> 8 hours. Form: For the healthcare, funeral and embalming sectors TWA: 0.37 mg/m<sup>3</sup> 8 hours. STEL: 0.6 ppm 15 minutes. STEL: 0.74 mg/m<sup>3</sup> 15 minutes. TWA: 0.3 ppm 8 hours.</p>
<p>No exposure limit value known.</p>	

## SECTION 8: Exposure controls/personal protection

n-Butyl acetate	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021).</b> STEL: 150 ppm 15 minutes. STEL: 723 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 241 mg/m <sup>3</sup> 8 hours.
Methylisobutylketone	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021).</b> TWA: 20 ppm 8 hours. TWA: 83 mg/m <sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 208 mg/m <sup>3</sup> 15 minutes.
1-Methoxy 2-propanol	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin.</b> TWA: 100 ppm 8 hours. TWA: 375 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 568 mg/m <sup>3</sup> 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-Methoxy-1-methylethyl acetate	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 275 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 550 mg/m <sup>3</sup> 15 minutes.
Toluene	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin.</b> STEL: 100 ppm 15 minutes. STEL: 384 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 192 mg/m <sup>3</sup> 8 hours.
Formaldehyde	<b>Grand-Duchy Regulation 2016. Carcinogens or mutagens agents. Annex III (Luxembourg, 3/2021). Skin sensitiser.</b> STEL: 0.6 ppm 15 minutes. STEL: 0.74 mg/m <sup>3</sup> 15 minutes. TWA: 0.3 ppm 8 hours. TWA: 0.37 mg/m <sup>3</sup> 8 hours.
n-Butyl acetate	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> STEL: 150 ppm 15 minutes. STEL: 723 mg/m <sup>3</sup> 15 minutes. TWA: 241 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
Methylisobutylketone	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 20 ppm 8 hours. TWA: 83 mg/m <sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 208 mg/m <sup>3</sup> 15 minutes.
1-Methoxy 2-propanol	<b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 100 ppm 8 hours. TWA: 375 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 568 mg/m <sup>3</sup> 15 minutes.
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-Methoxy-1-methylethyl acetate	<b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b>

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Toluene	<p>TWA: 50 ppm 8 hours. TWA: 275 mg/m<sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 550 mg/m<sup>3</sup> 15 minutes.</p> <p><b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b></p> <p>TWA: 192 mg/m<sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. STEL: 384 mg/m<sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes.</p>
Formaldehyde	<p><b>Ministry of Health (Malta, 1/2021). Skin sensitiser.</b></p> <p>TWA: 0.5 ppm 8 hours. TWA: 0.62 mg/m<sup>3</sup> 8 hours.</p>
n-Butyl acetate	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b></p> <p>OEL, 8-h TWA: 241 mg/m<sup>3</sup> 8 hours. STEL, 15-min: 723 mg/m<sup>3</sup> 15 minutes. STEL, 15-min: 150 ppm 15 minutes. OEL, 8-h TWA: 50 ppm 8 hours.</p>
Methylisobutylketone	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b></p> <p>OEL, 8-h TWA: 104 mg/m<sup>3</sup> 8 hours. STEL, 15-min: 208 mg/m<sup>3</sup> 15 minutes. OEL, 8-h TWA: 25 ppm 8 hours. STEL, 15-min: 50 ppm 15 minutes.</p>
1-Methoxy 2-propanol	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). Absorbed through skin.</b></p> <p>OEL, 8-h TWA: 375 mg/m<sup>3</sup> 8 hours. STEL, 15-min: 563 mg/m<sup>3</sup> 15 minutes. OEL, 8-h TWA: 100 ppm 8 hours. STEL, 15-min: 150 ppm 15 minutes.</p>
acetone	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b></p> <p>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.</p>
2-Methoxy-1-methylethyl acetate	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b></p> <p>OEL, 8-h TWA: 550 mg/m<sup>3</sup> 8 hours. OEL, 8-h TWA: 100 ppm 8 hours.</p>
Toluene	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b></p> <p>OEL, 8-h TWA: 150 mg/m<sup>3</sup> 8 hours. STEL, 15-min: 384 mg/m<sup>3</sup> 15 minutes. STEL, 15-min: 100 ppm 15 minutes. OEL, 8-h TWA: 39 ppm 8 hours.</p>
Formaldehyde	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). Skin sensitiser.</b></p> <p>OEL, 8-h TWA: 0.15 mg/m<sup>3</sup> 8 hours. STEL, 15-min: 0.5 mg/m<sup>3</sup> 15 minutes. STEL, 15-min: 0.41 ppm 15 minutes. OEL, 8-h TWA: 0.12 ppm 8 hours.</p>
No exposure limit value known.	
n-Butyl acetate	<p><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></p> <p>TWA: 240 mg/m<sup>3</sup> 8 hours. STEL: 720 mg/m<sup>3</sup> 15 minutes.</p>
Methylisobutylketone	<p><b>Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible</b></p>

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1-Methoxy 2-propanol	<p>concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021).</p> <p>TWA: 83 mg/m<sup>3</sup> 8 hours. STEL: 200 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
iso-butanol	<p>TWA: 180 mg/m<sup>3</sup> 8 hours. STEL: 360 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
acetone	<p>TWA: 100 mg/m<sup>3</sup> 8 hours. STEL: 200 mg/m<sup>3</sup> 15 minutes.</p> <p><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></p>
Butan-1-ol	<p>TWA: 600 mg/m<sup>3</sup> 8 hours. STEL: 1800 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
2-Methoxy-1-methylethyl acetate	<p>TWA: 50 mg/m<sup>3</sup> 8 hours. STEL: 150 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
Toluene	<p>TWA: 260 mg/m<sup>3</sup> 8 hours. STEL: 520 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
Formaldehyde	<p>TWA: 100 mg/m<sup>3</sup> 8 hours. STEL: 200 mg/m<sup>3</sup> 15 minutes.</p> <p><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). Absorbed through skin.</b></p>
n-Butyl acetate	<p>TWA: 0.37 mg/m<sup>3</sup> 8 hours. STEL: 0.74 mg/m<sup>3</sup> 15 minutes.</p> <p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b></p>
Methylisobutylketone	<p>TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.</p> <p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b></p>
1-Methoxy 2-propanol	<p>TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes.</p> <p><b>Portuguese Institute of Quality (Portugal, 11/2014).</b></p>
	<p>TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.</p>

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iso-butanol	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 50 ppm 8 hours.
acetone	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.
Butan-1-ol	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 20 ppm 8 hours.
2-Methoxy-1-methylethyl acetate	<b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 50 ppm 8 hours. TWA: 275 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 550 mg/m <sup>3</sup> 15 minutes.
Toluene	<b>Portuguese Institute of Quality (Portugal, 11/2014). Absorbed through skin.</b> TWA: 20 ppm 8 hours.
Formaldehyde	<b>Portuguese Institute of Quality (Portugal, 11/2014). Skin sensitiser.</b> CEIL: 0.3 ppm
No exposure limit value known.	
No exposure limit value known.	
n-Butyl acetate	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 241 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. KTV: 723 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 150 ppm, 4 times per shift, 15 minutes.
Methylisobutylketone	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.</b> TWA: 83 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. KTV: 208 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 50 ppm, 4 times per shift, 15 minutes.
1-Methoxy 2-propanol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.</b> TWA: 375 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours. KTV: 568 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 150 ppm, 4 times per shift, 15 minutes.
iso-butanol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 310 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours. KTV: 310 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 100 ppm, 4 times per shift, 15 minutes.
acetone	<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.
Butan-1-ol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 310 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours. KTV: 310 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 100 ppm, 4 times per shift, 15 minutes.
2-Methoxy-1-methylethyl acetate	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.</b> TWA: 275 mg/m <sup>3</sup> 8 hours.

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Toluene	<p>TWA: 50 ppm 8 hours.            KTV: 550 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.            KTV: 100 ppm, 4 times per shift, 15 minutes.</p> <p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b>  <b>Absorbed through skin.</b>            TWA: 192 mg/m<sup>3</sup> 8 hours.            TWA: 50 ppm 8 hours.            KTV: 384 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.            KTV: 100 ppm, 4 times per shift, 15 minutes.</p>
Formaldehyde	<p><b>Regulation on the protection of workers from the risks related to exposure to carcinogens or mutagens (Slovenia, 7/2022).</b>  <b>Absorbed through skin. Skin sensitiser.</b>            Peak: 0.6 ml/m<sup>3</sup>, 4 times per shift, 15 minutes.            Peak: 0.74 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.            TWA: 0.3 ml/m<sup>3</sup> 8 hours.            TWA: 0.37 mg/m<sup>3</sup> 8 hours.</p>
No exposure limit value known.	
No exposure limit value known.	
No exposure limit value known.	
n-Butyl acetate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>            STEL: 966 mg/m<sup>3</sup> 15 minutes.            STEL: 200 ppm 15 minutes.            TWA: 724 mg/m<sup>3</sup> 8 hours.            TWA: 150 ppm 8 hours.</p>
Methylisobutylketone	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>            STEL: 416 mg/m<sup>3</sup> 15 minutes.            STEL: 100 ppm 15 minutes.            TWA: 208 mg/m<sup>3</sup> 8 hours.            TWA: 50 ppm 8 hours.</p>
1-Methoxy 2-propanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>            STEL: 560 mg/m<sup>3</sup> 15 minutes.            STEL: 150 ppm 15 minutes.            TWA: 375 mg/m<sup>3</sup> 8 hours.            TWA: 100 ppm 8 hours.</p>
iso-butanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b>            STEL: 231 mg/m<sup>3</sup> 15 minutes.            STEL: 75 ppm 15 minutes.            TWA: 154 mg/m<sup>3</sup> 8 hours.            TWA: 50 ppm 8 hours.</p>
acetone	<p><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.</p>
Butan-1-ol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>            STEL: 154 mg/m<sup>3</sup> 15 minutes.            STEL: 50 ppm 15 minutes.</p>
2-Methoxy-1-methylethyl acetate	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b>            STEL: 548 mg/m<sup>3</sup> 15 minutes.            TWA: 50 ppm 8 hours.            TWA: 274 mg/m<sup>3</sup> 8 hours.            STEL: 100 ppm 15 minutes.</p>
Xylene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.</b>            STEL: 441 mg/m<sup>3</sup> 15 minutes.            TWA: 50 ppm 8 hours.            TWA: 220 mg/m<sup>3</sup> 8 hours.            STEL: 100 ppm 15 minutes.</p>

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Toluene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 384 mg/m <sup>3</sup> 15 minutes. TWA: 191 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
1,2,4-trimethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [trimethylbenzenes, all isomers or mixtures]</b> TWA: 25 ppm 8 hours. TWA: 125 mg/m <sup>3</sup> 8 hours.
Formaldehyde	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes. TWA: 2 ppm 8 hours. TWA: 2.5 mg/m <sup>3</sup> 8 hours.
1,3,5-Trimethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [trimethylbenzenes, all isomers or mixtures]</b> TWA: 25 ppm 8 hours. TWA: 125 mg/m <sup>3</sup> 8 hours.

### Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
Toluene	<b>Minister Cabinet Regulations No.325 - BEI (Latvia, 7/2018)</b> BEI: 0.05 mg/l, toluene [in blood]. BEI: 1.6 g/g creatinine, hippuric acid [in urine]. Sampling time: end of the 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.	



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Methylisobutylketone	<b>Portuguese Institute of Quality (Portugal, 11/2014)</b> BEI: 1 mg/l, methylisobutylketone (MIBK) [in urine]. Sampling time: end of shift.
acetone	<b>Portuguese Institute of Quality (Portugal, 11/2014)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: end of shift.
Toluene	<b>Portuguese Institute of Quality (Portugal, 11/2014)</b> BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: end of shift at the end of the workweek.
No exposure indices known.	
No exposure indices known.	
Methylisobutylketone	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> BAT: 0.7 mg/l, 4-methylpentan-2-one [in urine]. Sampling time: at the end of the work shift.
1-Methoxy 2-propanol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> BAT: 15 mg/l, 1-methoxypropan-2-ol [in urine]. Sampling time: at the end of the 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.
Butan-1-ol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> BAT: 10 mg/g creatinine, 1-butanol (after hydrolysis) [in urine]. Sampling time: at the end of the work shift. BAT: 2 mg/g creatinine, 1-butanol (after hydrolysis) [in urine]. Sampling time: before the work shift.
Toluene	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> BAT: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: at the end of the work shift, at long-term exposure: at the end of the work shift after several consecutive workdays. BAT: 600 µg/l, toluene [in blood]. Sampling time: immediately after exposure. BAT: 75 µg/l, toluene [in urine]. Sampling time: at the end of the work shift.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
Methylisobutylketone	<b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018)</b> BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.
Xylene	<b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers]</b> BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.

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**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	
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 <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	300 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	300 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	300 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	600 mg/m <sup>3</sup>	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 <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	48 mg/m <sup>3</sup>	Workers	Systemic	
Methylisobutylketone	DNEL	Long term Oral	4.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	14.7 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	14.7 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	83 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	83 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	155.2 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	155.2 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	208 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	208 mg/m <sup>3</sup>	Workers	Systemic	
	1-Methoxy 2-propanol	DNEL	Long term Oral	33 mg/kg bw/day	General population	Systemic

## SECTION 8: Exposure controls/personal protection

iso-butanol	DNEL	Long term Inhalation	43.9 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	78 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	369 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	553.5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	553.5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	55 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	310 mg/m <sup>3</sup>	Workers	Local
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
Butan-1-ol	DNEL	Long term Inhalation	1210 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	2420 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Oral	1.5625 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	55.357 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	155 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	310 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local
2-Methoxy-1-methylethyl acetate	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	36 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	275 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	320 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	550 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	796 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	8.13 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Local
Toluene	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic
	DNEL	Short term	226 mg/m <sup>3</sup>	General	Local

## SECTION 8: Exposure controls/personal protection

Formaldehyde	DNEL	Inhalation Short term	226 mg/m <sup>3</sup>	population General population	Systemic
	DNEL	Inhalation Long term Dermal	384 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Short term	384 mg/m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Short term	384 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Inhalation Long term	0.375 mg/ m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Short term	0.75 mg/m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Long term Dermal	12 µg/cm <sup>2</sup>	General population	Local
	DNEL	Dermal Long term	37 µg/cm <sup>2</sup>	Workers	Local
	DNEL	Inhalation Long term	0.1 mg/m <sup>3</sup>	General population	Local
	DNEL	Inhalation Long term	3.2 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Inhalation Long term Oral	4.1 mg/kg bw/day	General population	Systemic
	DNEL	Inhalation Long term	9 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Dermal Long term	102 mg/kg bw/day	General population	Systemic
	DNEL	Dermal Long term	240 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

##### **Skin protection**

##### **Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations : Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

## SECTION 8: Exposure controls/personal protection

1 - 4 hours (breakthrough time): 4H / Silver Shield® gloves.

- 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 X  
Filter type (spray application): A X P
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

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

Ingredient name	°C	°F	Method
acetone	56.05	132.9	
iso-butanol	108	226.4	OECD 103

- Flammability** : Not available.
- Lower and upper explosion limit** : Lower: 1.4%  
Upper: 13%
- Flash point** : Closed cup: -19°C (-2.2°F)
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
1-Methoxy 2-propanol	270	518	
2-Methoxy-1-methylethyl acetate	333	631.4	DIN 51794

- 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.

## SECTION 9: Physical and chemical properties

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
acetone	180.01463	24				
Methylisobutylketone	15.75128	2.1				

Relative density : Not available.

Density : 1.1 g/cm<sup>3</sup>

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
n-Butyl acetate	LC50 Inhalation Vapour	Rat	0.74 mg/l	4 hours
	LD50 Dermal	Rabbit	14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
Methylisobutylketone	LD50 Oral	Rat	2080 mg/kg	-
	LD50 Dermal	Rabbit	13 g/kg	-
		Rat	6600 mg/kg	-
1-Methoxy 2-propanol	LC50 Inhalation Vapour	Rat	19200 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
iso-butanol	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Inhalation Vapour	Rat	24000 mg/m <sup>3</sup>	4 hours
		Rabbit	3400 mg/kg	-
acetone	LD50 Oral	Rat	790 mg/kg	-
	LD50 Inhalation Vapour	Rat	24000 mg/m <sup>3</sup>	4 hours
		Rabbit	3400 mg/kg	-
Butan-1-ol	LD50 Oral	Rat	790 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Toluene	LC50 Inhalation Vapour	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
	LD50 Oral	Rat	250 ppm	4 hours
Formaldehyde	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
	LD50 Dermal	Rabbit	270 mg/kg	-

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## SECTION 11: Toxicological information

	LD50 Oral	Rat	100 mg/kg	-
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**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Acute toxicity estimates

Route	ATE value
Oral	14370.85 mg/kg
Dermal	108600 mg/kg
Inhalation (gases)	253400 ppm
Inhalation (vapours)	56.89 mg/l

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-Butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Methylisobutylketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Eyes - Severe irritant	Rabbit	-	40 mg	-
1-Methoxy 2-propanol	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	500 mg	-
acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Moderate irritant	Rabbit	-	10 uL	-
Butan-1-ol	Eyes - Severe irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Rabbit	-	20 mg	-
Toluene	Eyes - Severe irritant	Rabbit	-	395 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Formaldehyde	Eyes - Severe irritant	Rabbit	-	0.005 MI	-
	Skin - Moderate irritant	Rabbit	-	24 hours 2 mg	-
Formaldehyde	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Skin - Mild irritant	Rabbit	-	870 ug	-
Formaldehyde	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 uL	-
Formaldehyde	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
Formaldehyde	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Human	-	6 minutes 1 ppm	-
Formaldehyde	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Eyes - Severe irritant	Rabbit	-	750 ug	-
Formaldehyde	Skin - Mild irritant	Human	-	72 hours 150 ug l	-
	Skin - Moderate irritant	Rabbit	-	540 mg	-
Formaldehyde	Skin - Mild irritant	Rabbit	-	24 hours 50 mg	-
	Skin - Severe irritant	Human	-	0.01 %	-
Formaldehyde	Skin - Severe irritant	Rabbit	-	0.8 %	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-

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

### Sensitisation

## SECTION 11: Toxicological information

**Conclusion/Summary** : May cause an allergic skin reaction.

### Mutagenicity

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

### Carcinogenicity

**Conclusion/Summary** : May cause cancer. Risk of cancer depends on duration and level of exposure.

### 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
n-Butyl acetate	Category 3	-	Narcotic effects
Methylisobutylketone	Category 3	-	Narcotic effects
1-Methoxy 2-propanol	Category 3	-	Narcotic effects
iso-butanol	Category 3	-	Respiratory tract irritation
acetone	Category 3	-	Narcotic effects
Butan-1-ol	Category 3	-	Narcotic effects Respiratory tract irritation
2-Methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Toluene	Category 3	-	Narcotic effects
Formaldehyde	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Toluene	Category 2	-	-

### Aspiration hazard

Product/ingredient name	Result
Toluene	ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

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

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

**Skin contact** : May cause an allergic skin reaction.

**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  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness



## SECTION 11: Toxicological information

- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

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

#### Long term exposure

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

#### Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- 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
n-Butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - <i>Artemia salina</i>	48 hours
Methylisobutylketone	Acute LC50 18000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 505000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - <i>Pimephales promelas</i> - Embryo	33 days
		Crustaceans - <i>Artemia salina</i>	48 hours
iso-butanol	Acute LC50 600 mg/l Marine water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 1030000 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
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
		Fish - <i>Gasterosteus aculeatus</i> - Larvae	42 days
Butan-1-ol	Acute EC50 1983000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours

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Toluene	Acute EC50 12500 µg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	
	Acute EC50 11600 µg/l Fresh water	Crustaceans - <i>Gammarus pseudolimnaeus</i> - Adult	48 hours	
	Acute EC50 5.56 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours	
	Acute LC50 5500 µg/l Fresh water	Fish - <i>Oncorhynchus kisutch</i> - Fry	96 hours	
	Formaldehyde	Chronic NOEC 1000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
		Acute EC50 3.48 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
		Acute EC50 0.788 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
		Acute EC50 12.98 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
		Acute EC50 5800 µg/l Fresh water	Daphnia - <i>Daphnia pulex</i> - Neonate	48 hours
		Acute LC50 1.41 ppm Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 0.005 mg/l Marine water	Algae - <i>Isochrysis galbana</i> - Exponential growth phase	96 hours	
	Chronic NOEC 953.9 ppm Fresh water	Fish - <i>Oncorhynchus tshawytscha</i> - Egg	43 days	

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

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
iso-butanol	-	74 % - Readily - 28 days	-	-

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

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
iso-butanol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
n-Butyl acetate	2.3	-	Low
Methylisobutylketone	1.9	-	Low
1-Methoxy 2-propanol	<1	-	Low
iso-butanol	1	-	Low
acetone	-0.23	-	Low
Butan-1-ol	1	-	Low
2-Methoxy-1-methylethyl acetate	1.2	-	Low
Toluene	2.73	90	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

## SECTION 12: Ecological information

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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

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






**European waste catalogue (EWC)** : 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 spill 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	UN1993	UN1993	UN1993	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (n-butyl acetate, 4-methylpentan-2-one)	FLAMMABLE LIQUID, N.O.S. (n-butyl acetate, 4-methylpentan-2-one)	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol, 1-methoxy-2-propanol)	FLAMMABLE LIQUID, N.O.S. (2-methylpropan-1-ol, 1-methoxy-2-propanol)
14.3 Transport hazard class(es)	3 	3 	3  	3 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

**ADR/RID** : **Special provisions** 640 (C)  
**Tunnel code** (D/E)

**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.

## SECTION 14: Transport information

**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]
AC EMAILLACK FM 3021-15	≥90	3 28
Toluene	<1	48
Formaldehyde	≤0.3	28 72

**Labelling** : Restricted to professional users.

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

Czech Republic

Denmark

Finland

## SECTION 15: Regulatory information

### France

<b>Social Security Code, Articles L 461-1 to L 461-7</b>	:	n-Butyl acetate	RG 84
		Methylisobutylketone	RG 84
		1-Methoxy 2-propanol	RG 84
		iso-butanol	RG 84
		acetone	RG 84
		Butan-1-ol	RG 84
		2-Methoxy-1-methylethyl acetate	RG 84
		Toluene	RG 4bis, RG 84
	Formaldehyde	RG 43, RG 43bis, RG 84	

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

### Germany

#### Hazardous incident ordinance

### Italy

### Netherlands

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

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

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

### Norway

### Sweden

### Switzerland

#### 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. 2, H225 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 1B, H350 STOT SE 3, H336	On basis of test data Calculation method Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH066	Repeated exposure may cause skin dryness or cracking.

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

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1B	CARCINOGENICITY - Category 1B
Carc. 2	CARCINOGENICITY - Category 2
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
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

## SECTION 16: Other information

**Date of issue/ Date of revision** : 19/12/2023  
**Date of previous issue** : No previous validation  
**Version** : 1

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All variants

### Notice to reader

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

