

# SAFETY DATA SHEET



METRO 9110-00

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

### 1.1 Product identifier

Product name : METRO 9110-00

### 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

Skin Irrit. 2, H315

Eye Dam. 1, H318

STOT SE 3, H336

Aquatic Chronic 3, H412

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

**Ingredients of unknown toxicity** : 56.2 percent of the mixture consists of component(s) of unknown acute oral toxicity  
56.2 percent of the mixture consists of component(s) of unknown acute dermal toxicity  
56.2 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

**Ingredients of unknown ecotoxicity** : Contains 56.2% 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. H315 - Causes skin irritation. H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness. H412 - Harmful to aquatic life with long lasting effects.
<b><u>Precautionary statements</u></b>	
<b>General</b>	: P103 - Read carefully and follow all instructions.
<b>Prevention</b>	: P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Response</b>	: P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	: P405 - Store locked up.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Contains: acetone; Alcohols, C12-18, ethoxylated and formic acid
<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>	:

### 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
acetone	REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≥25 - ≤50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	EUH066: C ≥ 25%	[1] [2]
Distillates (petroleum), hydrotreated light	REACH #: 01-2119484819-18 EC: 265-149-8 CAS: 64742-47-8	≤5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]
Alcohols, C12-18, ethoxylated	EC: 500-201-8 CAS: 68213-23-0	≤5	Eye Dam. 1, H318	-	[1]
formic acid	REACH #: 01-2119491174-37 EC: 200-579-1 CAS: 64-18-6 Index: 607-001-00-0	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318	ATE [Oral] = 730 mg/kg ATE [Inhalation (vapours)] = 7.4 mg/l Skin Corr. 1A,	[1] [2]

## SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the H statements declared above.	H314: C ≥ 90% Skin Corr. 1B, H314: 10% ≤ C < 90% Skin Irrit. 2, H315: 2% ≤ C < 10%	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

## SECTION 4: First aid measures

- 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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 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".

## SECTION 6: Accidental release measures

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

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

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

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

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

## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

### 7.3 Specific end use(s)

<b>Date of issue/Date of revision</b>	: 08/05/2024	<b>Date of previous issue</b>	: No previous validation	<b>Version</b>	: 1	<b>5/24</b>
METRO 9110-00					<b>Label No</b> :50635	

## SECTION 7: Handling and storage

**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.
formic acid	<b>Regulation on Limit Values - MAC (Austria, 4/2021).</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours. CEIL: 5 ppm CEIL: 9 mg/m <sup>3</sup>
acetone	<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.
Distillates (petroleum), hydrotreated light	<b>Limit values (Belgium, 5/2021). Absorbed through skin.</b> TWA: 200 mg/m <sup>3</sup> , (total hydrocarbon vapour) 8 hours.
formic acid	<b>Limit values (Belgium, 5/2021).</b> TWA: 5 ppm 8 hours. TWA: 9.5 mg/m <sup>3</sup> 8 hours. STEL: 10 ppm 15 minutes. STEL: 19 mg/m <sup>3</sup> 15 minutes.
acetone	<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.
formic acid	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021).</b> Limit value 8 hours: 9 mg/m <sup>3</sup> 8 hours. Limit value 8 hours: 5 ppm 8 hours.
acetone	<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.
formic acid	<b>Ministry of Economy, Labour and Entrepreneurship ELV/STELV (Croatia, 1/2021).</b> ELV: 9 mg/m <sup>3</sup> 8 hours. ELV: 5 ppm 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.
formic acid	<b>Department of labour inspection (Cyprus, 7/2021).</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours.



## SECTION 8: Exposure controls/personal protection

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.
formic acid	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022).</b> TWA: 9 mg/m <sup>3</sup> 8 hours. TWA: 4.707 ppm 8 hours. STEL: 18 mg/m <sup>3</sup> 15 minutes. STEL: 9.414 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.
formic acid	<b>Working Environment Authority (Denmark, 6/2022).</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours. STEL: 18 mg/m <sup>3</sup> 15 minutes. STEL: 10 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.
formic acid	<b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022).</b> TWA: 9 mg/m <sup>3</sup> 8 hours. TWA: 5 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.
formic acid	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours.
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.
formic acid	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021).</b> TWA: 3 ppm 8 hours. TWA: 5 mg/m <sup>3</sup> 8 hours. STEL: 10 ppm 15 minutes. STEL: 19 mg/m <sup>3</sup> 15 minutes.
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.
formic acid	<b>Ministry of Labor (France, 10/2022). Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours.

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acetone	<p><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.</p> <p><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.</p>
Distillates (petroleum), hydrotreated light	<p><b>DFG MAC-values list (Germany, 7/2022). [distillates (petroleum), hydrotreated light (Aerosol)]</b>  TWA: 5 mg/m<sup>3</sup> 8 hours. Form: respirable fraction  PEAK: 20 mg/m<sup>3</sup>, 4 times per shift, 15 minutes. Form: respirable fraction</p> <p><b>DFG MAC-values list (Germany, 7/2022). [distillates (petroleum), hydrotreated light (vapour)]</b>  TWA: 350 mg/m<sup>3</sup> 8 hours. Form: vapour  TWA: 50 ppm 8 hours. Form: vapour  PEAK: 100 ppm, 4 times per shift, 15 minutes. Form: vapour  PEAK: 700 mg/m<sup>3</sup>, 4 times per shift, 15 minutes. Form: vapour</p>
formic acid	<p><b>TRGS 900 OEL (Germany, 6/2022).</b>  TWA: 300 mg/m<sup>3</sup> 8 hours.</p> <p><b>TRGS 900 OEL (Germany, 6/2022).</b>  TWA: 9.5 mg/m<sup>3</sup> 8 hours.  PEAK: 19 mg/m<sup>3</sup> 15 minutes.  TWA: 5 ppm 8 hours.  PEAK: 10 ppm 15 minutes.</p> <p><b>DFG MAC-values list (Germany, 7/2022).</b>  TWA: 5 ppm 8 hours.  PEAK: 10 ppm, 4 times per shift, 15 minutes.  TWA: 9.5 mg/m<sup>3</sup> 8 hours.  PEAK: 19 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.</p>
acetone	<p><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.</p>
formic acid	<p><b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021).</b>  TWA: 5 ppm 8 hours.  TWA: 9 mg/m<sup>3</sup> 8 hours.</p>
acetone	<p><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.</p>
formic acid	<p><b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022).</b>  TWA: 9 mg/m<sup>3</sup> 8 hours.  TWA: 5 ppm 8 hours.</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>
formic acid	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b>  TWA: 9 mg/m<sup>3</sup> 8 hours.  TWA: 5 ppm 8 hours.</p>
acetone	<p><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.</p>
formic acid	<p><b>NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values</b>  OELV-8hr: 5 ppm 8 hours.  OELV-8hr: 9 mg/m<sup>3</sup> 8 hours.</p>



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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.
formic acid	<b>Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020).</b> 8 hours: 5 ppm 8 hours. 8 hours: 9 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.
formic acid	<b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b> TWA: 5 ppm 8 hours. TWA: 9 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.
formic acid	<b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b> TWA: 9 mg/m <sup>3</sup> 8 hours. TWA: 5 ppm 8 hours.
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.
formic acid	<b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021).</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 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.
formic acid	<b>EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values</b> TWA: 5 ppm 8 hours. TWA: 9 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.
formic acid	<b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022).</b> STEL,15-min: 5 mg/m <sup>3</sup> 15 minutes. STEL,15-min: 2.7 ppm 15 minutes.
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.
formic acid	<b>FOR-2011-12-06-1358 (Norway, 12/2022). Notes: indicative limit value</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours.

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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.
formic acid	<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: 5 mg/m <sup>3</sup> 8 hours. STEL: 15 mg/m <sup>3</sup> 15 minutes.
acetone	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.
Distillates (petroleum), hydrotreated light	<b>Portuguese Institute of Quality (Portugal, 11/2014). [Kerosenes/ Jet fuels in the form of steam] Absorbed through skin.</b> TWA: 200 mg/m <sup>3</sup> , (expressed as total hydrocarbons) 8 hours. Form: Vapour
formic acid	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 5 ppm 8 hours. STEL: 10 ppm 15 minutes.
acetone	<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.
formic acid	<b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021).</b> VLA: 9 mg/m <sup>3</sup> 8 hours. VLA: 5 ppm 8 hours.
acetone	<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.
formic acid	<b>Government regulation SR c. 355/2006 (Slovakia, 9/2020).</b> TWA: 9 mg/m <sup>3</sup> 8 hours. TWA: 5 ppm 8 hours.
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.
formic acid	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> TWA: 9 mg/m <sup>3</sup> 8 hours. TWA: 5 ppm 8 hours. KTV: 10 ppm, 4 times per shift, 15 minutes. KTV: 18 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.
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.
formic acid	<b>National institute of occupational safety and health (Spain, 4/2022).</b> TWA: 5 ppm 8 hours. TWA: 9 mg/m <sup>3</sup> 8 hours.

## SECTION 8: Exposure controls/personal protection

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.
formic acid	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021).</b> TWA: 3 ppm 8 hours. TWA: 5 mg/m <sup>3</sup> 8 hours. STEL: 5 ppm 15 minutes. STEL: 9 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.
Distillates (petroleum), hydrotreated light	<b>SUVA (Switzerland, 1/2023). [Distillates (petroleum), hydrotreated light, unspecified (aerosol) and (steam)]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction TWA: 350 mg/m <sup>3</sup> 8 hours. STEL: 700 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
formic acid	<b>SUVA (Switzerland, 1/2023).</b> TWA: 5 ppm 8 hours. TWA: 9.5 mg/m <sup>3</sup> 8 hours. STEL: 10 ppm 15 minutes. STEL: 19 mg/m <sup>3</sup> 15 minutes.
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.
formic acid	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 9.6 mg/m <sup>3</sup> 8 hours. TWA: 5 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.	

## SECTION 8: Exposure controls/personal protection

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.
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.

## SECTION 8: Exposure controls/personal protection

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
Alcohols, C12-18, ethoxylated	DNEL	Long term Oral	25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	87 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	294 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	1250 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2080 mg/kg bw/day	Workers	Systemic
formic acid	DNEL	Long term Inhalation	3 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	9.5 mg/m <sup>3</sup>	Workers	Local

### PNECs

No PNECs available

## 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

## SECTION 8: Exposure controls/personal protection

### 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

**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	ASTM D 86
Distillates (petroleum), hydrotreated light	90 to 300	194 to 572	

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

Ingredient name	°C	°F	Method
Distillates (petroleum), hydrotreated light	>220	>428	
Polyethylene wax	244.85	472.7	

**Decomposition temperature** : Not available.  
**pH** : 4.5 to 5.5 [Conc. (% w/w): 100%]  
**Viscosity** : Not available.  
**Solubility(ies)** :



## SECTION 9: Physical and chemical properties

Not available.

**Solubility in water** : Not available.

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

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
acetone	180.01463	24	EU A.4			
formic acid	32.03522	4.3				

**Relative density** : Not available.

**Density** : 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
acetone	LD50 Oral	Rat	5800 mg/kg	-
formic acid	LC50 Inhalation Vapour	Rat	7400 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	730 mg/kg	-

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

#### Acute toxicity estimates

Route	ATE value
Oral	10660.43 mg/kg
Inhalation (vapours)	108.06 mg/l

#### Irritation/Corrosion

## SECTION 11: Toxicological information

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	-
Alcohols, C12-18, ethoxylated formic acid	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	122 mg	-
	Skin - Mild irritant	Rabbit	-	610 mg	-

**Conclusion/Summary** : Causes skin irritation.

### Sensitisation

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

### Mutagenicity

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

### Carcinogenicity

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

### Reproductive toxicity

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

### Teratogenicity

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

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
acetone	Category 3	-	Narcotic effects
Distillates (petroleum), hydrotreated light	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Product/ingredient name	Result
Distillates (petroleum), hydrotreated light	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** : Causes skin 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  
watering  
redness

## SECTION 11: Toxicological information

<b>Inhalation</b>	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Ingestion</b>	: 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

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Potential chronic health effects

Not available.

<b>Conclusion/Summary</b>	: Not available.
<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: 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
	Chronic NOEC 5 µg/l Marine water	Fish - <i>Lepomis macrochirus</i>	4 days
Distillates (petroleum), hydrotreated light formic acid	Acute LC50 2200 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i>	4 days
	Acute EC50 151200 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Larvae	48 hours
	Acute LC50 80000 to 90000 µg/l Marine water	Crustaceans - <i>Carcinus maenas</i> - Adult	48 hours

## SECTION 12: Ecological information

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

### 12.2 Persistence and degradability

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

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
acetone	-0.23	-	Low
Alcohols, C12-18, ethoxylated	4.2	-	High
formic acid	-2.3	-	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.

#### Packaging

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

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

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1993	UN1993	UN1993	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (acetone, Distillates (petroleum), hydrotreated light)	FLAMMABLE LIQUID, N.O.S. (acetone, Distillates (petroleum), hydrotreated light)	FLAMMABLE LIQUID, N.O.S. (Distillates (petroleum), hydrotreated light, formic acid)	FLAMMABLE LIQUID, N.O.S. (Distillates (petroleum), hydrotreated light, formic acid)
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.

**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]
METRO 9110-00	≥90	3

#### Labelling

:

#### Other EU regulations

## SECTION 15: Regulatory information

**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** : 5-3

**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: 5-3

**Application:** When spraying in new\* booths if the operator is outside the spray zone. During non-atomising spraying in existing\* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Air-supplied full mask must be worn.

When using scraper or knife, brush, roller, etc. for pre- and post-treatments in



## SECTION 15: Regulatory information

cabins or booths of the existing\* facility type, if the operator is inside the spray zone. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and coveralls must be worn.

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

- Air-supplied full mask, arm protectors and apron 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

- Social Security Code, Articles L 461-1 to L 461-7** : acetone RG 84  
Distillates (petroleum), hydrotreated light RG 84  
Alcohols, C12-18, ethoxylated RG 84

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

### Germany

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

### Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

Category	Reference number
P5c	1.2.5.3

**Hazard class for water** : 3

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 95%  
TA-Luft Class I - Number 5.2.5: 3%

### Italy

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

### Netherlands

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

## SECTION 15: Regulatory information

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
complexe derivatives of oil and charcoal	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](#)

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

[Switzerland](#)

**VOC content** : VOC (w/w): 34.8%

[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 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method Calculation method

[Full text of abbreviated H statements](#)

## SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 08/05/2024

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

**Version** : 1

METRO 9110-00

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.

