

### Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 25/05/2023 Revision date: 24/03/2023 Supersedes version of: 11/03/2022 Version: 1.1

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

#### 1.1. Product identifier

Product name : EMI 35

UFI : DY4X-78GT-U00V-X85P

Product code : BDS001662AE Vaporizer : Aerosol

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

#### 1.2.1. Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : Conduction electric/thermal

#### 1.2.2. Uses advised against

No additional information available

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

#### Supplier

CRC Industries Europe B.V. Touwslagerstraat 1 9240 Zele Belgium

T +32(0)52/45.60.11 - F +32(0)52/45.00.34

hse@crcind.com - www.crcind.com

#### 1.4. Emergency telephone number

Emergency number : +32(0)52/45.60.11

Office hours: 9-17h CET

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)

### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

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

Aerosol, Category 1 H222;H229
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity – Single exposure, Category 3, Narcosis
Hazardous to the aquatic environment – Acute Hazard, Category 1 H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411
Full text of H- and EUH-statements: see section 16

### Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol. May cause drowsiness or dizziness. Causes serious eye irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

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#### 2.2. Label elements

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

Hazard pictograms (CLP)







GHS02

: Danger

02 GHS07

GHS09

Signal word (CLP)

Contains : n-butyl acetate; butanone; ethyl methyl ketone; propyl acetate; 1-methoxy-2-propanol;

monopropylene glycol methyl ether

Hazard statements (CLP) : H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P102 - Keep out of reach of children.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use. P261 - Avoid breathing vapours/spray.

P271 - Use only outdoors or in a well-ventilated area.

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C. P501 - Dispose of contents/container to a hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation. EUH066 - Repeated exposure may cause skin dryness or cracking.

#### 2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Other information

**EUH-statements** 

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

### **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
dimethyl ether (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 115-10-6 EC-No.: 204-065-8 EC Index-No.: 603-019-00-8 REACH-no: 01-2119472128- 37	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280
Granulated copper substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 7440-50-8 EC-No.: 231-159-6 EC Index-No.: 029-024-00-X REACH-no: 01-2119480154- 42	10 – 25	Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propyl acetate substance with national workplace exposure limit(s) (BE)	CAS-No.: 109-60-4 EC-No.: 203-686-1 EC Index-No.: 607-024-00-6 REACH-no: 01-2119484620-39	10 – 25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
n-butyl acetate substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 123-86-4 EC-No.: 204-658-1 EC Index-No.: 607-025-00-1 REACH-no: 01-2119485493-	≤ 20	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
1-methoxy-2-propanol; monopropylene glycol methyl ether substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 107-98-2 EC-No.: 203-539-1 EC Index-No.: 603-064-00-3 REACH-no: 01-2119457435- 35	5 – 10	Flam. Liq. 3, H226 STOT SE 3, H336
butanone; ethyl methyl ketone substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 78-93-3 EC-No.: 201-159-0 EC Index-No.: 606-002-00-3 REACH-no: 01-2119457290-43	1 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
isopentyl acetate substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 123-92-2 EC-No.: 204-662-3 EC Index-No.: 607-130-00-2 REACH-no: 01-2119548408- 32	< 2,5	Flam. Liq. 3, H226 EUH066
2-(2-heptadec-8-enyl-2-imidazoline-1-yl)ethanol	CAS-No.: 95-38-5 EC-No.: 202-414-9 REACH-no: 01-2119777867- 13	< 1	Acute Tox. 4 (Oral), H302 (ATE=1265 mg/kg bodyweight) Skin Corr. 1, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

Full text of H- and EUH-statements: see section 16

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If signs/symptoms develop,

get medical attention.

First-aid measures after skin contact : Wash skin with plenty of water. Seek medical attention if irritation develops.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Seek medical

attention if irritation develops.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : Eye irritation.

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

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : Extremely flammable aerosol.

Explosion hazard : Pressurised container: May burst if heated.

Hazardous decomposition products in case of fire : During fire, gases hazardous to health may be formed.

#### 5.3. Advice for firefighters

Firefighting instructions : Move containers from fire area if it can be done without personal risk. Use standard

firefighting procedures and consider the hazards of other involved materials.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

### **SECTION 6: Accidental release measures**

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear appropriate protective equipment and clothing during clean-up.

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing

dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

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

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. For large spills, confine the spill in a dike and charge it

with wet sand or earth for subsequent safe disposal. Following product recovery, flush area with water. Take up small spills with dry chemical absorbent. Clean surface thoroughly to

remove residual contamination.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For disposal of contaminated materials refer to section 13: "Disposal considerations".

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### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid prolonged exposure. Handle in accordance with good industrial

hygiene and safety procedures.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

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

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated

place. Keep cool. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

### 8.1.1 National occupational exposure and biological limit values

n-butyl acetate (123-86-4)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	n-Butyl acetate	
IOEL TWA	241 mg/m³	
IOEL TWA [ppm]	50 ppm	
IOEL STEL	723 mg/m³	
IOEL STEL [ppm]	150 ppm	
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831	
Belgium - Occupational Exposure Limits		
Local name	Acétate de n-butyle # n-Butylacetaat	
OEL TWA	238 mg/m³	
OEL TWA [ppm]	50 ppm	
OEL STEL	712 mg/m³	
OEL STEL [ppm]	150 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
butanone; ethyl methyl ketone (78-93-3)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Butanone	
IOEL TWA	600 mg/m³	
IOEL TWA [ppm]	200 ppm	
IOEL STEL	900 mg/m³	
IOEL STEL [ppm]	300 ppm	

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butanone; ethyl methyl ketone (78-93-3)		
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Belgium - Occupational Exposure Limits		
Local name	2-Butanone # 2-Butanon	
OEL TWA	600 mg/m³	
OEL TWA [ppm]	200 ppm	
OEL STEL	900 mg/m³	
OEL STEL [ppm]	300 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
Granulated copper (7440-50-8)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Copper	
IOEL TWA	0,01 mg/m³ (respirable fraction)	
Remark	(Year of adoption 2014)	
Regulatory reference	SCOEL Recommendations	
Belgium - Occupational Exposure Limits		
Local name	Cuivre (en Cu) # Koper (als Cu)	
OEL TWA	0,2 mg/m³ (fumées) # (rook) 1 mg/m³ (poussières et brouillards de) # (stof en nevel)	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
propyl acetate (109-60-4)		
Belgium - Occupational Exposure Limits		
Local name	Acétate de n-propyle # Propylacetaat	
OEL TWA	847 mg/m³	
OEL TWA [ppm]	200 ppm	
OEL STEL	1055 mg/m³	
OEL STEL [ppm]	250 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
isopentyl acetate (123-92-2)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Isopentylacetate	
IOEL TWA	270 mg/m³	
IOEL TWA [ppm]	50 ppm	
IOEL STEL	540 mg/m³	
IOEL STEL [ppm]	100 ppm	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Belgium - Occupational Exposure Limits		
Local name	Acétates de pentyle tous isomères # Pentyl acetaat, alle isomeren	
OEL TWA	270 mg/m³	
OEL TWA [ppm]	50 ppm	

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isopentyl acetate (123-92-2)		
OEL STEL	540 mg/m³	
OEL STEL [ppm]	100 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
1-methoxy-2-propanol; monopropylene glyco	l methyl ether (107-98-2)	
EU - Indicative Occupational Exposure Limit (IOEL		
Local name	1-Methoxypropanol-2	
IOEL TWA	375 mg/m³	
IOEL TWA [ppm]	100 ppm	
IOEL STEL	568 mg/m³	
IOEL STEL [ppm]	150 ppm	
Remark	Skin	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Belgium - Occupational Exposure Limits		
Local name	1-Méthoxy-2-propanol # 1-Methoxy-2-propanol	
OEL TWA	184 mg/m³	
OEL TWA [ppm]	50 ppm	
OEL STEL	369 mg/m³	
OEL STEL [ppm]	100 ppm	
Remark	D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
dimethyl ether (115-10-6)		
EU - Indicative Occupational Exposure Limit (IOEL	)	
Local name	Dimethylether	
IOEL TWA	1920 mg/m³	
IOEL TWA [ppm]	1000 ppm	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Belgium - Occupational Exposure Limits		
Local name	Oxyde de diméthyle # Dimethylether	
OEL TWA	1920 mg/m³	
OEL TWA [ppm]	1000 ppm	
Regulatory reference Koninklijk besluit/Arrêté royal 11/05/2021		

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

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### 8.1.4. DNEL and PNEC

butanone; ethyl methyl ketone (78-93-3)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1161 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	600 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	31 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	106 mg/m³
Long-term - systemic effects, dermal	412 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	55,8 mg/l
PNEC aqua (marine water)	55,8 mg/l
PNEC aqua (intermittent, freshwater)	55,8 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	284,74 mg/kg dwt
PNEC sediment (marine water)	284,7 mg/kg dwt
PNEC (Soil)	
PNEC soil	22,5 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	1000 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	709 mg/l
Granulated copper (7440-50-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	273 mg/kg bodyweight/day
Acute - local effects, inhalation	1 mg/m³
Long-term - systemic effects, dermal	137 mg/kg bodyweight/day
Long-term - local effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	273 mg/kg bodyweight/day
Acute - local effects, inhalation	1 mg/m³
Long-term - systemic effects,oral	0,041 mg/kg bodyweight/day
Long-term - systemic effects, dermal	137 mg/kg bodyweight/day
Long-term - local effects, inhalation	1 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	7,8 µg/l
PNEC aqua (marine water)	5,2 μg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	87 mg/kg dwt
PNEC sediment (marine water)	676 mg/kg dwt

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Granulated copper (7440-50-8)	
PNEC (Soil)	
PNEC soil	65 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	230 µg/l
propyl acetate (109-60-4)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	840 mg/m³
Long-term - local effects, inhalation	420 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	298 mg/m³
Acute - local effects, inhalation	420 mg/m³
Long-term - systemic effects, inhalation	149 mg/m³
Long-term - local effects, inhalation	210 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0,06 mg/l
PNEC aqua (marine water)	0,006 mg/l
PNEC aqua (intermittent, freshwater)	0,6 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,16 mg/kg dwt
PNEC sediment (marine water)	0,016 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,0215 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l
1-methoxy-2-propanol; monopropylene	glycol methyl ether (107-98-2)
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	553,5 mg/m³
Acute - local effects, inhalation	553,5 mg/m³
Long-term - systemic effects, dermal	183 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	369 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	33 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	43,9 mg/m³
Long-term - systemic effects, dermal	78 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	100 mg/l

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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
PNEC (Sediment)	
PNEC sediment (freshwater)	52,3 mg/kg dwt
PNEC sediment (marine water)	5,2 mg/kg dwt
PNEC (Soil)	
PNEC soil	4,59 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### 8.2.2. Personal protection equipment

### Personal protective equipment symbol(s):





#### 8.2.2.1. Eye and face protection

#### Eye protection:

Use eye protection according to EN 166. Safety glasses with side shields.

### 8.2.2.2. Skin protection

### Skin and body protection:

Wear suitable protective clothing

### Hand protection:

Wear suitable gloves tested to EN374. The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Nitrile gloves are recommended.

#### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Approved organic vapour respirator. Filter type: A

#### 8.2.2.4. Thermal hazards

### Thermal hazard protection:

Not expected to present a significant hazard under anticipated conditions of normal use. Wear appropriate thermal protective clothing, when necessary

#### 8.2.3. Environmental exposure controls

### Environmental exposure controls:

Avoid release to the environment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : copper.

Appearance : DME propelled liquid.

Odour : Solvent.
Odour threshold : Not available
Melting point : Not applicable
Freezing point : Not available
Boiling point : Not available

Flammability : Extremely flammable aerosol.

Explosive properties : Pressurised container: May burst if heated.

**Explosive limits** : Not available Lower explosion limit : Not available Upper explosion limit : Not available : -4 °C (closed cup) Flash point : > 150 °C Auto-ignition temperature : Not available Decomposition temperature рΗ : Not applicable Viscosity, kinematic Not available Solubility : insoluble in water. Partition coefficient n-octanol/water (Log Kow) : Not applicable Vapour pressure : Not available Vapour pressure at 50°C : Not available : 1,3 g/cm3 at 20 °C Density : 1,3 at 20 °C Relative density Relative vapour density at 20°C : Not available Particle characteristics : Not applicable

### 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

% of flammable ingredients : 75 – 100 %

9.2.2. Other safety characteristics

VOC content : 738 g/l

Additional information : For aerosols data for the product without propellant.

### **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Carbon oxides (CO, CO2).

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### **SECTION 11: Toxicological information**

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)

: Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (dermal)

: Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhelation)

: Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met)	
n-butyl acetate (123-86-4)		
LD50 oral rat	10760 mg/kg	
LD50 dermal rabbit	> 17600 mg/kg	
LC50 Inhalation - Rat (Dust/Mist)	23,4 mg/l/4h	
butanone; ethyl methyl ketone (78-93-3)		
LD50 oral rat	> 2193 mg/kg bodyweight	
LD50 dermal	6400 mg/kg bodyweight	
LC50 Inhalation - Rat (Dust/Mist)	> 5000 mg/l/4h	
Granulated copper (7440-50-8)		
LD50 oral rat	> 2500 mg/kg	
LD50 dermal rat	> 2000 mg/kg bodyweight	
LC50 Inhalation - Rat	> 5,11 mg/l/4h	
propyl acetate (109-60-4)		
LD50 oral rat	8700 mg/kg bodyweight	
LD50 dermal rabbit	> 17800 mg/kg bodyweight	
LC50 Inhalation - Rat	32 mg/l/4h	
isopentyl acetate (123-92-2)		
LD50 oral	7400 mg/kg rabbit	
LD50 dermal rabbit	> 5000 mg/kg bodyweight	
2-(2-heptadec-8-enyl-2-imidazoline-1-yl)ethan	nol (95-38-5)	
LD50 oral rat	1265 mg/kg	
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)		
LD50 oral rat	4016 mg/kg	
LD50 dermal rabbit	> 2000 mg/kg	
LC50 Inhalation - Rat	> 25,8 mg/l	
dimethyl ether (115-10-6)		
LC50 Inhalation - Rat	308,5 mg/l/4h	
LC50 Inhalation - Rat [ppm]	164000 ppm	
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable	

n-butyl acetate (123-86-4)	
рН	6,2
2-(2-heptadec-8-enyl-2-imidazoline-1-yl)ethanol (95-38-5)	
рН	11,1

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Serious eye damage/irritation	: Causes serious eye irritation. pH: Not applicable
n-butyl acetate (123-86-4)	
pH	6,2
2-(2-heptadec-8-enyl-2-imidazoline-1-yl)e	ethanol (95-38-5)
рН	11,1
Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity STOT-single exposure	<ul> <li>Not classified (Based on available data, the classification criteria are not met)</li> <li>Not classified (Based on available data, the classification criteria are not met)</li> <li>Not classified (Based on available data, the classification criteria are not met)</li> <li>Not classified (Based on available data, the classification criteria are not met)</li> <li>May cause drowsiness or dizziness.</li> </ul>
n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.
butanone; ethyl methyl ketone (78-93-3)	
STOT-single exposure	May cause drowsiness or dizziness.
propyl acetate (109-60-4)	
STOT-single exposure	May cause drowsiness or dizziness.
1-methoxy-2-propanol; monopropylene	glycol methyl ether (107-98-2)
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
propyl acetate (109-60-4)	
LOAEC (inhalation, rat, vapour, 90 days)	21409 mg/l air
isopentyl acetate (123-92-2)	
NOAEL (subchronic, oral, animal/female, 90 day	s) 443,07 mg/kg bodyweight
2-(2-heptadec-8-enyl-2-imidazoline-1-yl)e	ethanol (95-38-5)
NOAEL (oral, rat, 90 days)	20 mg/kg bodyweight
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
1-methoxy-2-propanol; monopropylene	glycol methyl ether (107-98-2)
LOAEL (oral, rat, 90 days)	2757 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	919 mg/kg bodyweight
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
EMI 35	
Vaporizer	Aerosol
n-butyl acetate (123-86-4)	
Viscosity, kinematic	0,83 mm²/s

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isopentyl acetate (123-92-2)		
Viscosity, kinematic 1,176 mm²/s		
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)		
Viscosity, kinematic 1,848 mm²/s		

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### 11.2.2. Other information

No additional information available

### **SECTION 12: Ecological information**

### 12.1. Toxicity

Ecology - general

: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term

(acute)

: Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Toxic to aquatic life with long lasting effects.

vot rapidity degradable				
n-butyl acetate (123-86-4)				
LC50 - Fish [1]	18 mg/l			
EC50 - Crustacea [1]	44 mg/l			
EC50 72h - Algae [1]	674,7 mg/l			
LOEC (chronic)	47,6 mg/l			
NOEC (chronic)	23,2 mg/l			
NOEC chronic algae	200 mg/l			
butanone; ethyl methyl ketone (78-93-3)				
LC50 - Fish [1]	2993 mg/l			
EC50 - Crustacea [1]	308 mg/l			
EC50 - Other aquatic organisms [1]	308 mg/l			
EC50 72h - Algae [1]	1972 mg/l			
EC50 96h - Algae [1]	2029 mg/l			
Granulated copper (7440-50-8)				
LC50 - Fish [1]	0,193 mg/l			
EC50 - Crustacea [1]	0,1 – 1 mg/l Daphnia magna (Water flea)			
EC50 72h - Algae [1]	0,1 – 1 mg/l			
NOEC chronic fish	0,188 mg/l			
NOEC chronic crustacea	0,1 – 1 mg/l			

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propyl acetate (109-60-4)				
60 mg/l				
91,5 mg/l Daphnia magna (Water flea)				
672 mg/l				
22 – 46 mg/l				
42 mg/l Daphnia magna (Water flea)				
450 mg/l				
ol (95-38-5)				
0,3 mg/l				
0,163 mg/l Daphnia magna (Water flea)				
0,03 mg/l				
l methyl ether (107-98-2)				
6812 mg/l				
20800 mg/l				
21100 – 25900 mg/l				
2954 mg/l				
> 1000 mg/l				
dimethyl ether (115-10-6)				
> 4,1 g/l				
> 4,4 g/l Daphnia magna (Water flea)				
154917 mg/l				

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

EMI 35			
Partition coefficient n-octanol/water (Log Kow)	Not applicable		
n-butyl acetate (123-86-4)			
Partition coefficient n-octanol/water (Log Pow)	2,3		
butanone; ethyl methyl ketone (78-93-3)			
Partition coefficient n-octanol/water (Log Pow) 0,3			
Granulated copper (7440-50-8)			
Partition coefficient n-octanol/water (Log Pow)	-0,57		
propyl acetate (109-60-4)			
Partition coefficient n-octanol/water (Log Pow)	1,24		
isopentyl acetate (123-92-2)			
Partition coefficient n-octanol/water (Log Pow)	3,18		

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2-(2-heptadec-8-enyl-2-imidazoline-1-yl)ethanol (95-38-5)		
Partition coefficient n-octanol/water (Log Pow)	7,51	
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)		
Bioconcentration factor (BCF REACH)	< 100	
Partition coefficient n-octanol/water (Log Pow)	0,37	
dimethyl ether (115-10-6)		
Partition coefficient n-octanol/water (Log Pow)	0,07	

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

EMI 35	
Results of PBT assessment	Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

### 12.7. Other adverse effects

Additional information

: No other effects known

Global warming potential (GWP) : 0 (Fluorinated greenhouse gases - (EC) No 517/2014)

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Waste treatment methods

European List of Waste (LoW) code

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : According to the European Waste Catalogue (EWC), Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used.

### **SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	umber			
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shippin	g name			
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document descr	iption			
UN 1950 AEROSOLS, 2.1, (D), ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS	UN 1950 Aerosols, flammable, 2.1, ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

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ADR	IMDG	IATA	ADN	RID	
14.3. Transport hazard o	class(es)				
2.1	2.1	2.1	2.1	2.1	
22	2	2	2 22	2	
14.4. Packing group					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	
14.5. Environmental haz	zards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	
No supplementary information	on available				

### 14.6. Special precautions for user

#### **Overland transport**

Classification code (ADR) : 5F

Special provisions (ADR) : 190, 327, 344, 625

Limited quantities (ADR) : 1I Excepted quantities (ADR) : E0

Packing instructions (ADR) : P207, LP200
Special packing provisions (ADR) : PP87, RR6, L2

Mixed packing provisions (ADR) : MP9

Transport category (ADR) : 2

Special provisions for carriage - Packages (ADR) : V14

Special provisions for carriage - Loading, unloading : CV9, CV12

and handling (ADR)

Special provisions for carriage - Operation (ADR) : S2 Tunnel restriction code (ADR) : D

#### Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 381, 959

Limited quantities (IMDG) : SP277
Excepted quantities (IMDG) : E0

Packing instructions (IMDG) : P207, LP200
Special packing provisions (IMDG) : PP87, L2
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U
Stowage category (IMDG) : None
Stowage and handling (IMDG) : SW1, SW22
Segregation (IMDG) : SG69

#### Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Y203
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 203
PCA max net quantity (IATA) : 75kg
CAO packing instructions (IATA) : 203
CAO max net quantity (IATA) : 150kg

Special provisions (IATA) : A145, A167, A802

ERG code (IATA) : 10L

Inland waterway transport

Classification code (ADN) : 5F

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Special provisions (ADN) : 190, 327, 344, 625

Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E0
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01, VE04

Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : 5F

Special provisions (RID) : 190, 327, 344, 625

Limited quantities (RID) : 1L Excepted quantities (RID) : E0

Packing instructions (RID) : P207, LP200 Special packing provisions (RID) : PP87, RR6, L2

Mixed packing provisions (RID) : MP9
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W14
Special provisions for carriage - Loading, unloading : CW9, CW12

and handling (RID)

Colis express (express parcels) (RID) : CE2
Hazard identification number (RID) : 23

#### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

### **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

#### **REACH Annex XVII (Restriction List)**

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

### **PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

#### **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### VOC Directive (2004/42)

VOC content : 738 g/l

### **Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### **Drug Precursors Regulation (273/2004)**

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Methylethylketone	Butanone	78-93-3	2914 12 00	Category 3		Annex I

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### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### **SECTION 16: Other information**

Abbreviations a	and acronyms:
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified

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Abbreviations and acronyms:		
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aerosol 1	Aerosol, Category 1
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Corr. 1	Skin corrosion/irritation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

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