

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 16/10/2023 Revision date: 19/09/2023 Supersedes version of: 15/04/2022 Version: 2.0

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

#### 1.1. Product identifier

Product name : Galva Shine

UFI : 9TXX-G8YJ-C00V-3WKA

Product code : BDS002375AE 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 : Anti Corrosion Products

#### 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
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity – Single exposure, Category 3, H336

Narcosis

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 skin irritation. Causes serious eye irritation.

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#### 2.2. Label elements

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

Hazard pictograms (CLP)





GHS02

GHS07

Signal word (CLP) : Danger

Contains ethyl acetate; Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics;

Hydrocarbons, C9, aromatics; acetone; propan-2-one; propanone

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

H229 - Pressurised container: May burst if heated.

H315 - Causes skin irritation. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.

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.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. 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.

**EUH-statements** EUH208 - Contains 4-morpholinecarbaldehyde (4394-85-8). May produce an allergic

reaction.

## 2.3. Other hazards

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

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]
propane substance with national workplace exposure limit(s) (BE)	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944- 21	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280
butane substance with national workplace exposure limit(s) (BE)	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0 REACH-no: 01-2119474691-32	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
xylene substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 1330-20-7 EC-No.: 215-535-7 EC Index-No.: 601-022-00-9 REACH-no: 01-2119488216- 32	10 – 50	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Skin Irrit. 2, H315
ethyl acetate substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5 REACH-no: 01-2119475103-	10 – 50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
isobutane substance with national workplace exposure limit(s) (BE)	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395- 27	10 – 25	Flam. Gas 1, H220 Press. Gas (Liq.), H280
aluminium powder (stabilised) substance with national workplace exposure limit(s) (BE)	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-002-00-1 REACH-no: 01-2119529243-	< 15	Water-react. 2, H261 Flam. Sol. 1, H228
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	EC-No.: 919-857-5 REACH-no: 01-2119463258- 33	1 – 10	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066
ethylbenzene substance with a Community workplace exposure limit	CAS-No.: 100-41-4 EC-No.: 202-849-4 EC Index-No.: 601-023-00-4 REACH-no: 01-2119489370- 35	1 – 10	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
acetone; propan-2-one; propanone substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 67-64-1 EC-No.: 200-662-2 EC Index-No.: 606-001-00-8 REACH-no: 01-2119471330-	1 – 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
4-morpholinecarbaldehyde	CAS-No.: 4394-85-8 EC-No.: 224-518-3 REACH-no: 01-2119987993- 12	< 1	Skin Sens. 1, H317

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. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. Seek medical attention if irritation develops.

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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 : Irritation. Repeated exposure may cause skin dryness or cracking

Symptoms/effects after eye contact : Eye irritation.

#### 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

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

: Wash contaminated clothing before reuse. 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

propane (74-98-6)	
Belgium - Occupational Exposure Limits	
Local name	Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3) # Alifatische koolwaterstoffen in gas-vorm: Alkanen (C1-C3)
OEL TWA [ppm]	1000 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
isobutane (75-28-5)	
Belgium - Occupational Exposure Limits	
Local name	Butane, tous isomères: iso-butane # Butaan, alle isomeren: iso-butaan
OEL STEL	2370 mg/m³
OEL STEL [ppm]	980 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
butane (106-97-8)	
Belgium - Occupational Exposure Limits	
Local name	Butane, tous isomères: n-butane # Butaan, alle isomeren: n-butaan
OEL STEL	2370 mg/m³
OEL STEL [ppm]	980 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
xylene (1330-20-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Xylene, mixed isomers, pure
IOEL TWA	221 mg/m³

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xylene (1330-20-7)		
IOEL TWA [ppm]	50 ppm	
IOEL STEL	442 mg/m³	
IOEL STEL [ppm]	100 ppm	
Remark	Skin	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Belgium - Occupational Exposure Limits		
Local name	Xylène, isomères mixtes, purs # Xyleen, mengsel van isomeren, zuiver	
OEL TWA	221 mg/m³	
OEL TWA [ppm]	50 ppm	
OEL STEL	442 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	
ethyl acetate (141-78-6)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Ethyl acetate	
IOEL TWA	734 mg/m³	
IOEL TWA [ppm]	200 ppm	
IOEL STEL	1468 mg/m³	
IOEL STEL [ppm]	400 ppm	
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164	
Belgium - Occupational Exposure Limits		
Local name	Acétate d'éthyle # Ethylacetaat	
OEL TWA	734 mg/m³	
OEL TWA [ppm]	200 ppm	
OEL STEL	1468 mg/m³	
OEL STEL [ppm]	400 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	
aluminium powder (stabilised) (7429-90-5)		
Belgium - Occupational Exposure Limits		
Local name	Aluminium # Aluminium	
OEL TWA	2 mg/m³ (composés alkylés) (en Al) # Aluminiumalkylen (als Al) 1 mg/m³ (métal et composés insolubles, fraction alvéolaire) # (metaal en onoplosbare verbindingen, inadembare fractie)	
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021	

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ethylbenzene (100-41-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylbenzene
IOEL TWA	442 mg/m³
IOEL TWA [ppm]	100 ppm
IOEL STEL	884 mg/m³
IOEL STEL [ppm]	200 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
acetone; propan-2-one; propanone (67-64-1)	
EU - Indicative Occupational Exposure Limit (IOEL	)
Local name	Acetone
IOEL TWA	1210 mg/m³
IOEL TWA [ppm]	500 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Belgium - Occupational Exposure Limits	
Local name	Acétone # Aceton
OEL TWA	594 mg/m³
OEL TWA [ppm]	246 ppm
OEL STEL	1187 mg/m³
OEL STEL [ppm]	492 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

# 8.1.4. DNEL and PNEC

xylene (1330-20-7)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	442 mg/m³
Acute - local effects, inhalation	442 mg/m³
Long-term - systemic effects, dermal	212 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	221 mg/m³
Long-term - local effects, inhalation	221 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	260 mg/m³
Acute - local effects, inhalation	260 mg/m³
Long-term - systemic effects,oral	12,5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	65,3 mg/m³
Long-term - systemic effects, dermal	125 mg/kg bodyweight/day

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PNEC (Water)         0.327 mgl           PNEC aqua (marine water)         0.327 mgl           PNEC aqua (marine water)         0.327 mgl           PNEC (Sediment)         The PNEC Sediment (freshwater)           PNEC Sediment (freshwater)         12.46 mg/kg dwt           PNEC Sediment (freshwater)         12.46 mg/kg dwt           PNEC Sodiment (marine water)         2.31 mg/kg dwt           PNEC Sodiment (marine water)         6.58 mg/l           PNEC Sodiment (water water)         6.58 mg/l           PNEC Sodiment (water water	xylene (1330-20-7)		
PNEC aqua (maine water)         0,327 mg/l           PNEC aqua (maine water)         0,327 mg/l           PNEC (sediment)         V           PNEC sediment (freshwater)         12,46 mg/kg dwt           PNEC sediment (marine water)         12,46 mg/kg dwt           PNEC (soll)         V           PNEC (soll)         V           PNEC seadinent plant         6,58 mg/l           ethyl acetate (141-78-6)         V           DNELDMEL (Workers)         V           Acute - systemic effects, inhalation         1468 mg/m²           Acute - systemic effects, inhalation         1468 mg/m²           Long-term - systemic effects, inhalation         23 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         37 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         37 mg/	Long-term - local effects, inhalation	65,3 mg/m³	
PNEC aqua (marine water)         0,327 mg/l           PNEC (sodiment)         0,327 mg/l           PNEC (sodiment)         12.46 mg/kg dwt           PNEC sediment (marine water)         12.46 mg/kg dwt           PNEC sediment (marine water)         12.46 mg/kg dwt           PNEC soil         2.31 mg/kg dwt           PNEC (SIP)         ************************************	PNEC (Water)		
PNEC aqua (intermittent, freshwater)         0,327 mg/l           PNEC (Sodiment)           PNEC sediment (freshwater)         12.46 mg/kg dwt           PNEC sediment (freshwater)         2.46 mg/kg dwt           PNEC soil         2.31 mg/kg dwt           PNEC soil         2.31 mg/kg dwt           PNEC sewage treatment plant         6.58 mg/l           ethylactate (141-78-6)           DNELIDMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         374 mg/m²           Acute - systemic effects, inhalation         374 mg/m²           Long-term - systemic effects, inhalation         377 mg/m²           Long-term - systemic effects, inhalation         377 mg/m²           Long-term - systemic effects, inhalation         377 mg/m²           Long-term - systemic effects, inhalation         37 mg/	PNEC aqua (freshwater)	0,327 mg/l	
PNEC (Sediment (freshwater)         12,46 mg/kg dwt           PNEC sediment (freshwater)         12,46 mg/kg dwt           PNEC (Soli)           PNEC (Soli)           PNEC (SIP)           PNEC sewage treatment plant         6,58 mg/l           ethyl acetate (141-78-6)           DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - systemic effects, inhalation         1468 mg/m²           Cong-term - systemic effects, dermal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m²           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, dermal         357 mg/m²           Long-term - systemic effects, dermal         357 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           PNEC (Water)           PNEC aqua (marine water)         0.24 mg/l <th col<="" td=""><td>PNEC aqua (marine water)</td><td>0,327 mg/l</td></th>	<td>PNEC aqua (marine water)</td> <td>0,327 mg/l</td>	PNEC aqua (marine water)	0,327 mg/l
PNEC sediment (freshwater)         12.46 mg/kg dwt           PNEC (Soli)           PNEC (Soli)           PNEC (Soli)           PNEC soli         2.31 mg/kg dwt           PNEC Sevage treatment plant         6.58 mg/l           ethyl acetate (141-78-6)         DNELDMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - systemic effects, inhalation         1468 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           NELDMEL (General population)         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Neur - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         35 mg/m²           Long-term - systemic effects, inhalation         35 mg/m²           Long-term - systemic effects, inhalation         36 mg/m²           Long-term - systemic effects, inhalation         37 mg/m²	PNEC aqua (intermittent, freshwater)	0,327 mg/l	
PNEC sediment (marine water) PNEC (Soil) PNEC (Soil) PNEC (Soil) PNEC (STP) PNEC Serby PNEC sewage treatment plant    5,58 mg/l	PNEC (Sediment)		
PNEC (soil)         2,31 mg/kg dwt           PNEC soil         2,31 mg/kg dwt           PNEC (STP)           PNEC swage treatment plant         6,58 mg/l           ethyl acetate (141-78-6)           DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - local effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           Long-term - local effects, inhalation         734 mg/m²           Acute - local effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         37 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation	PNEC sediment (freshwater)	12,46 mg/kg dwt	
PNEC soil         2,31 mg/kg dwt           PNEC (STP)           PNEC sewage treatment plant         6,58 mg/l           ethyl acetate (141-78-6)           DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - systemic effects, inhalation         1468 mg/m²           Cong-term - systemic effects, dermal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m²           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m³           Acute - local effects, inhalation         734 mg/m³           Acute - systemic effects, inhalation         734 mg/m³           Acute - local effects, inhalation         736 mg/m³           Acute - systemic effects, inhalation         736 mg/m³           Acute - systemic effects, inhalation         367 mg/m³           Acute - local effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Acute - local effects, inhalation         367 mg/m²	PNEC sediment (marine water)	12,46 mg/kg dwt	
PNEC (STP)         6,58 mg/l           othyl acetate (141-78-6)         6,58 mg/l           DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m³           Acute - local effects, inhalation         1468 mg/m³           Acute - systemic effects, demal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m³           Long-term - local effects, inhalation         734 mg/m³           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m³           Acute - systemic effects, inhalation         734 mg/m³           Long-term - systemic effects, inhalation         734 mg/m³           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalat	PNEC (Soil)		
PNEC sewage treatment plant         6.58 mg/l           othyl acetate (141-78-6)           DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m²           Acute - local effects, inhalation         1468 mg/m²           Long-term - systemic effects, demal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m²           DNEL/DMEL (General population)         734 mg/m²           Acute - local effects, inhalation         734 mg/m²           Acute - systemic effects, inhalation         734 mg/m²           Acute - local effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         734 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, inhalation         367 mg/m²           Long-term - systemic effects, dermal         37 mg/kg bodyweight/day           Long-term - systemic effects, dermal         37 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         367 mg/m²           PNEC (Water)         1.24 mg/m²           PNEC Qualu (firefitter, feshwater)         0.24 mg/l           PNEC aqua (mine water)         0.024 mg/l           PNEC (Sediment)         1.15 mg/kg dwt           PNEC (Soil)	PNEC soil	2,31 mg/kg dwt	
ethyl acetate (141-78-6)  DNEL/DMEL (Workers)  Acute - systemic effects, inhalation 1468 mg/m²  Acute - local effects, inhalation 1468 mg/m²  Long-term - systemic effects, cernal 63 mg/kg bodyweight/day  Long-term - systemic effects, inhalation 734 mg/m²  Long-term - local effects, inhalation 734 mg/m²  DNEL/DMEL (General population)  Acute - systemic effects, inhalation 734 mg/m²  Acute - local effects, inhalation 367 mg/m²  Acute - systemic effects, inhalation 367 mg/m²  Long-term - systemic effects, inhalation 367 mg/m²  Long-term - systemic effects, inhalation 367 mg/m²  PNEC water) 37 mg/kg bodyweight/day  Long-term - systemic effects, inhalation 367 mg/m²  PNEC (Water) 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m²  PNEC (water) 0,24 mg/l  PNEC (water) 0,24 mg/l  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 1,65 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC (Soli)	PNEC (STP)		
DNEL/DMEL (Workers)           Acute - systemic effects, inhalation         1468 mg/m³           Acute - local effects, inhalation         1468 mg/m³           Long-term - systemic effects, dermal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m³           Long-term - local effects, inhalation         734 mg/m³           Acute - systemic effects, inhalation         734 mg/m³           Acute - systemic effects, inhalation         734 mg/m³           Acute - local effects, inhalation         734 mg/m³           Acute - systemic effects, inhalation         34 mg/m³           Long-term - systemic effects, sinhalation         367 mg/m³           Long-term - systemic effects, inhalation         367 mg/m³           Long-term - systemic effects, inhalation         367 mg/m³           Long-term - systemic effects, inhalation         367 mg/m³           PNEC (Water)         9NEC (Water)           PNEC (Water)         9NEC (water)           PNEC (water)         0,24 mg/m³           PNEC (water)         0,24 mg/l           PNEC aqua (intermittent, freshwater)         0,24 mg/l           PNEC (sediment)         1,15 mg/kg dwt           PNEC sediment (freshwater)         0,115 mg/kg dwt           PNEC (soil)         1,15	PNEC sewage treatment plant	6,58 mg/l	
Acute - systemic effects, inhalation         1468 mg/m²           Acute - local effects, inhalation         1468 mg/m²           Long-term - systemic effects, dermal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m²           Long-term - local effects, inhalation         734 mg/m²           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m²           Acute - local effects, inhalation         734 mg/m²           Acute - local effects, inhalation         367 mg/m²           Long-term - systemic effects, oral         4.5 mg/kg bodyweight/day           Long-term - systemic effects, dermal         37 mg/kg bodyweight/day           Long-term - local effects, inhalation         367 mg/m²           PNEC (Water)           PNEC aqua (freshwater)         0,24 mg/l           PNEC aqua (freshwater)         0,024 mg/l           PNEC aqua (intermittent, freshwater)         1,15 mg/kg dwt           PNEC (Sediment)           PNEC sediment (freshwater)         0,115 mg/kg dwt           PNEC (Soil)           PNEC (Soil)           PNEC (Soil) <td colsp<="" td=""><td>ethyl acetate (141-78-6)</td><td></td></td>	<td>ethyl acetate (141-78-6)</td> <td></td>	ethyl acetate (141-78-6)	
Acute - local effects, inhalation 1468 mg/m² 63 mg/kg bodyweight/day 140 cmg-term - systemic effects, inhalation 734 mg/m³ 734	DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal         63 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         734 mg/m³           Long-term - local effects, inhalation         734 mg/m³           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m³           Acute - local effects, inhalation         734 mg/m³           Long-term - systemic effects, oral         4,5 mg/kg bodyweight/day           Long-term - systemic effects, dermal         367 mg/m³           Long-term - local effects, inhalation         367 mg/m³           PNEC (Water)           PNEC (water)           PNEC aqua (freshwater)         0,24 mg/l           PNEC aqua (intermitent, freshwater)         0,024 mg/l           PNEC (sediment)           PNEC (sediment)           PNEC sediment (freshwater)         1,15 mg/kg dwt           PNEC (soil)           PNEC (soil)           PNEC (soil)           PNEC (soil)           0,148 mg/kg dwt           PNEC (socal (secondary poisoning)         0,2 g/kg food           PNEC (sort)	Acute - systemic effects, inhalation	1468 mg/m³	
Long-term - systemic effects, inhalation         734 mg/m³           DNEL/DMEL (General population)           Acute - systemic effects, inhalation         734 mg/m³           Acute - local effects, inhalation         734 mg/m³           Acute - local effects, inhalation         734 mg/m³           Long-term - systemic effects, oral         4.5 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         367 mg/m³           Long-term - systemic effects, dermal         37 mg/kg bodyweight/day           Long-term - local effects, inhalation         367 mg/m³           PNEC (Water)         0,24 mg/l           PNEC aqua (freshwater)         0,24 mg/l           PNEC aqua (intermittent, freshwater)         0,024 mg/l           PNEC aqua (intermittent, freshwater)         1,65 mg/l           PNEC sediment)         1,15 mg/kg dwt           PNEC sediment (freshwater)         0,115 mg/kg dwt           PNEC sediment (marine water)         0,115 mg/kg dwt           PNEC (Soil)         0,148 mg/kg dwt           PNEC (Soil)         0,148 mg/kg dwt           PNEC (socal (secondary poisoning)         0,2 g/kg food           PNEC (STP)         0,2 g/kg food	Acute - local effects, inhalation	1468 mg/m³	
Long-term - local effects, inhalation  PNEL/DMEL (General population)  Acute - systemic effects, inhalation  734 mg/m³  Acute - local effects, inhalation  734 mg/m³  Acute - local effects, inhalation  734 mg/m³  Acute - local effects, inhalation  734 mg/m³  4,5 mg/kg bodyweight/day  Long-term - systemic effects, inhalation  367 mg/m³  Long-term - systemic effects, dermal  27 mg/kg bodyweight/day  28 mg/m³  PNEC (Water)  PNEC (Water)  PNEC aqua (freshwater)  PNEC aqua (marine water)  PNEC aqua (intermittent, freshwater)  PNEC aqua (intermittent, freshwater)  PNEC (Sediment)  PNEC (Sediment (freshwater)  PNEC sediment (freshwater)  1,15 mg/kg dwt  PNEC sediment (marine water)  0,148 mg/kg dwt  PNEC (Oral)  PNEC (Oral)  PNEC (SED)	Long-term - systemic effects, dermal	63 mg/kg bodyweight/day	
DNEL/DMEL (General population)  Acute - systemic effects, inhalation 734 mg/m³  Acute - local effects, inhalation 734 mg/m³  Acute - local effects, inhalation 734 mg/m³  Long-term - systemic effects, inhalation 367 mg/kg bodyweight/day  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC sediment (marine water) 0,148 mg/kg dwt  PNEC (Soil)  PNEC (Soil)  PNEC (Soil)  PNEC (Oral)  PNEC (oral)  PNEC (SEC)	Long-term - systemic effects, inhalation	734 mg/m³	
Acute - systemic effects, inhalation 734 mg/m³  Acute - local effects, inhalation 734 mg/m³  Long-term - systemic effects, oral 4.5 mg/kg bodyweight/day  Long-term - systemic effects, inhalation 367 mg/m³  Long-term - systemic effects, inhalation 367 mg/m³  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC (Water)  PNEC aqua (freshwater) 0.24 mg/l  PNEC aqua (marine water) 0.024 mg/l  PNEC aqua (intermittent, freshwater) 1.65 mg/l  PNEC sediment (freshwater) 1.15 mg/kg dwt  PNEC sediment (marine water) 0.115 mg/kg dwt  PNEC sediment (marine water) 0.148 mg/kg dwt  PNEC (Soil)  PNEC (Oral)  PNEC (Oral)  PNEC (STP)	Long-term - local effects, inhalation	734 mg/m³	
Acute - local effects, inhalation 734 mg/m³  Long-term - systemic effects, oral 4,5 mg/kg bodyweight/day  Long-term - systemic effects, inhalation 367 mg/m³  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC sediment (marine water) 0,148 mg/kg dwt  PNEC (Soil)  PNEC (Oral)  PNEC (Oral)  PNEC (STP)	DNEL/DMEL (General population)		
Long-term - systemic effects, inhalation 367 mg/m³  Long-term - systemic effects, inhalation 37 mg/kg bodyweight/day  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC sediment (marine water) 0,148 mg/kg dwt  PNEC soil 0,148 mg/kg dwt  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	Acute - systemic effects, inhalation	734 mg/m³	
Long-term - systemic effects, inhalation 367 mg/m³  Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC sediment (marine water) 0,148 mg/kg dwt  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	Acute - local effects, inhalation	734 mg/m³	
Long-term - systemic effects, dermal 37 mg/kg bodyweight/day  Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC (Sediment)  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food	Long-term - systemic effects,oral	4,5 mg/kg bodyweight/day	
Long-term - local effects, inhalation 367 mg/m³  PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC (Sediment)  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC (Soil)  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	Long-term - systemic effects, inhalation	367 mg/m³	
PNEC (Water)  PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC (Sediment)  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC (Soil)  PNEC (Soil)  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	Long-term - systemic effects, dermal	37 mg/kg bodyweight/day	
PNEC aqua (freshwater) 0,24 mg/l  PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC (Sediment)  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC (Soil)  PNEC (Soil)  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	Long-term - local effects, inhalation	367 mg/m³	
PNEC aqua (marine water) 0,024 mg/l  PNEC aqua (intermittent, freshwater) 1,65 mg/l  PNEC (Sediment)  PNEC sediment (freshwater) 1,15 mg/kg dwt  PNEC sediment (marine water) 0,115 mg/kg dwt  PNEC (Soil)  PNEC (Soil)  PNEC (Oral)  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	PNEC (Water)		
PNEC aqua (intermittent, freshwater)  PNEC (Sediment)  PNEC sediment (freshwater)  1,15 mg/kg dwt  PNEC sediment (marine water)  0,115 mg/kg dwt  PNEC (Soil)  PNEC soil  PNEC soil  0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning)  0,2 g/kg food  PNEC (STP)	PNEC aqua (freshwater)	0,24 mg/l	
PNEC (Sediment)  PNEC sediment (freshwater)  PNEC sediment (marine water)  PNEC (Soil)  PNEC (Soil)  PNEC soil  PNEC oral (secondary poisoning)  PNEC (STP)	PNEC aqua (marine water)	0,024 mg/l	
PNEC sediment (freshwater)  PNEC sediment (marine water)  O,115 mg/kg dwt  PNEC (Soil)  PNEC soil  PNEC soil  PNEC (Oral)  PNEC oral (secondary poisoning)  O,2 g/kg food  PNEC (STP)	PNEC aqua (intermittent, freshwater)	1,65 mg/l	
PNEC sediment (marine water)  PNEC (Soil)  PNEC soil  PNEC soil  PNEC (Oral)  PNEC oral (secondary poisoning)  0,148 mg/kg dwt  PNEC (STP)	PNEC (Sediment)		
PNEC (Soil)  PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	PNEC sediment (freshwater)	1,15 mg/kg dwt	
PNEC soil 0,148 mg/kg dwt  PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	PNEC sediment (marine water)	0,115 mg/kg dwt	
PNEC (Oral)  PNEC oral (secondary poisoning) 0,2 g/kg food  PNEC (STP)	PNEC (Soil)		
PNEC oral (secondary poisoning)  0,2 g/kg food  PNEC (STP)	PNEC soil	0,148 mg/kg dwt	
PNEC (STP)	PNEC (Oral)		
	PNEC oral (secondary poisoning)	0,2 g/kg food	
PNEC sewage treatment plant 650 mg/l	PNEC (STP)		
	PNEC sewage treatment plant	650 mg/l	

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Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	208 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	871 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	125 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	185 mg/m³	
Long-term - systemic effects, dermal	125 mg/kg bodyweight/day	
ethylbenzene (100-41-4)		
DNEL/DMEL (Workers)		
Acute - local effects, inhalation	293 mg/m³	
Long-term - systemic effects, dermal	180 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	77 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	1,6 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	15 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0,1 mg/l	
PNEC aqua (marine water)	0,01 mg/l	
PNEC aqua (intermittent, freshwater)	0,1 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	13,7 mg/kg dwt	
PNEC sediment (marine water)	1,37 mg/kg dwt	
PNEC (Soil)		
PNEC soil	2,68 mg/kg dwt	
PNEC (Oral)		
PNEC oral (secondary poisoning)	0,02 g/kg food	
PNEC (STP)		
PNEC sewage treatment plant	9,6 mg/l	
4-morpholinecarbaldehyde (4394-85-8)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	11,7 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	50,3 mg/m³	
Long-term - local effects, inhalation	13,3 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	4,17 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	8,93 mg/m³	
Long-term - systemic effects, dermal	4,17 mg/kg bodyweight/day	
Long-term - local effects, inhalation	13,3 mg/m³	

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4-morpholinecarbaldehyde (4394-85-8)	4-morpholinecarbaldehyde (4394-85-8)		
PNEC (Water)			
PNEC aqua (freshwater)	0,5 mg/l		
PNEC aqua (marine water)	0,05 mg/l		
PNEC aqua (intermittent, freshwater)	5 mg/l		
PNEC (Sediment)			
PNEC sediment (freshwater)	1,85 mg/kg dwt		
PNEC sediment (marine water)	0,185 mg/kg dwt		
PNEC (Soil)			
PNEC soil	0,0764 mg/kg dwt		
PNEC (STP)			
PNEC sewage treatment plant	2000 mg/l		
acetone; propan-2-one; propanone (67-64-	1)		
DNEL/DMEL (Workers)			
Acute - local effects, inhalation	2420 mg/m³		
Long-term - systemic effects, dermal	186 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	1210 mg/m³		
DNEL/DMEL (General population)			
Long-term - systemic effects,oral	62 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	200 mg/m³		
Long-term - systemic effects, dermal	62 mg/kg bodyweight/day		
PNEC (Water)			
PNEC aqua (freshwater)	10,6 mg/l		
PNEC aqua (marine water)	1,06 mg/l		
PNEC aqua (intermittent, freshwater)	21 mg/l		
PNEC (Sediment)			
PNEC sediment (freshwater)	30,4 mg/kg dwt		
PNEC sediment (marine water)	3,04 mg/kg dwt		
PNEC (Soil)			
PNEC soil	29,5 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.

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#### 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. Butyl-rubber protective gloves.

#### 8.2.2.3. Respiratory protection

#### Respiratory protection:

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

#### 8.2.2.4. Thermal hazards

Relative density

Relative vapour density at 20°C

#### 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.

#### SECTION 9: Physical and chemical properties

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

Physical state : Liquid Colour : Grey.

Appearance : Propane/butane propelled liquid.

Odour : characteristic.
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.

Lower explosion limit : Not available
Upper explosion limit : Not available
Flash point : -18 °C (closed cup)

: > 200 °C Auto-ignition temperature : Not available Decomposition temperature : Not applicable Viscosity, kinematic : Not available Solubility : Soluble in water. Partition coefficient n-octanol/water (Log Kow) : Not applicable Vapour pressure : Not available Vapour pressure at 50°C : Not available Density : 0,933 g/cm3 at 20 °C

19/09/2023 (Revision date) BE - en 11/20

: 0,933 at 20 °C

: Not available

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 : 550 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).

#### 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 (inhalation) : 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)	
xylene (1330-20-7)		
LD50 oral	4300 mg/kg bodyweight	
LD50 dermal rabbit	12126 mg/kg bodyweight	
LC50 Inhalation - Rat [ppm]	> ppm	
ethyl acetate (141-78-6)		
LD50 oral	4934 mg/kg bodyweight	
LD50 dermal rabbit	> 20000 (<) mg/kg bodyweight	
aluminium powder (stabilised) (7429-90-5)		
LD50 oral rat	> 15900 mg/kg bodyweight	
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics		
LD50 oral rat	> 5000 mg/kg	
LD50 dermal rat	> 5000 mg/kg	
LD50 dermal rabbit	> 5000 mg/kg	

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ethylbenzene (100-41-4)		
LD50 oral rat	≈ 3500 mg/kg bodyweight	
LD50 oral	3500 mg/kg bodyweight	
4-morpholinecarbaldehyde (4394-85-8)		
LD50 oral rat	> 7314 mg/kg bodyweight	
LD50 dermal rabbit	> 18400 mg/kg bodyweight	
LC50 Inhalation - Rat	> 5,319 mg/l/4h	
acetone; propan-2-one; propanone (67-64-1)		
LD50 oral rat	5800 mg/kg bodyweight	
LD50 dermal	> 15688 mg/kg bodyweight	
LC50 Inhalation - Rat	76 mg/l/4h	
Skin corrosion/irritation	Causes skin irritation. pH: Not applicable	
4-morpholinecarbaldehyde (4394-85-8)	Provide approximate	
pH	10	
•	Causes serious eye irritation.	
4 manus balina ann baldabuda (4204 05 0)	pH: Not applicable	
4-morpholinecarbaldehyde (4394-85-8)		
pH	10	
Respiratory or skin sensitisation : Germ cell mutagenicity :	Not classified (Based on available data, the classification criteria are not met)  Not classified (Based on available data, the classification criteria are not met)	
Carcinogenicity	Not classified (Based on available data, the classification criteria are not met)	
	Not classified (Based on available data, the classification criteria are not met)	
aluminium powder (stabilised) (7429-90-5)		
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight	
STOT-single exposure	May cause drowsiness or dizziness.	
ethyl acetate (141-78-6)		
STOT-single exposure	May cause drowsiness or dizziness.	
Hydrocarbons, C9-C11, n-alkanes, isoalkane	s, cyclics, < 2% aromatics	
STOT-single exposure	May cause drowsiness or dizziness.	
acetone; propan-2-one; propanone (67-64-1)		
STOT-single exposure	May cause drowsiness or dizziness.	
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)	
ethyl acetate (141-78-6)		
LOAEL (oral, rat, 90 days)	3600 mg/kg bodyweight	
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight	
aluminium powder (stabilised) (7429-90-5)		
NOAEL (subchronic, oral, animal/male, 90 days)	1034 mg/kg bodyweight	
NOAEL (subchronic, oral, animal/female, 90 days)	1087 mg/kg bodyweight	
ethylbenzene (100-41-4)		
NOAEL (oral, rat, 90 days)	75 mg/kg bodyweight	

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ethylbenzene (100-41-4)			
STOT-repeated exposure	May cause damage to organs (hearing organs) through prolonged or repeated exposure.		
4-morpholinecarbaldehyde (4394-85-8)			
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight		
Aspiration hazard	Not classified (Based on available data, the classification criteria are not met)		
Galva Shine			
Vaporizer	Aerosol		
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics			
Viscosity, kinematic	1,33 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.	Tox	icity
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: The product is not considered harmful to aquatic organisms nor to cause long-term adverse Ecology - general effects in the environment.

Hazardous to the aquatic environment, short-term

: Not classified

Hazardous to the aquatic environment, long-term (chronic)

: Not classified

Not rapidly degradable

tot rapidly degradable		
ethyl acetate (141-78-6)		
50 - Fish [1] 230 mg/l		
EC50 - Other aquatic organisms [1]	717 mg/l Daphnia magna (Water flea)	
NOEC (chronic)	2,4 mg/l 21 d	
aluminium powder (stabilised) (7429-90-5)		
LC50 - Fish [1]	> 100 mg/l	
EC50 - Other aquatic organisms [2]	> 100 mg/l	
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics		
LC50 - Fish [1]	> 1000 mg/l	
EC50 - Crustacea [1]	> 1000 mg/l	
EC50 - Other aquatic organisms [1]	> 1000 mg/l	
EC50 72h - Algae [1]	> 1000 mg/l	
ethylbenzene (100-41-4)		
LC50 - Fish [1]	5,1 mg/l Menidia menidia	
EC50 72h - Algae [1]	5,4 mg/l Raphidocelis subcapitata	

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ethylbenzene (100-41-4)			
EC50 96h - Algae [2]	7,7 mg/l Skeletonema costatum		
4-morpholinecarbaldehyde (4394-85-8)			
LC50 - Fish [1]	> 500 mg/l Leuciscus idus		
EC50 - Crustacea [1]	> 500 mg/l Daphnia magna		
EC50 72h - Algae [1]	23880 mg/l Desmodesmus subspicatus		
EC50 72h - Algae [2]	17440 mg/l Desmodesmus subspicatus		
acetone; propan-2-one; propanone (67-64-1)			
LC50 - Fish [1]	5540 mg/l		
EC50 - Other aquatic organisms [1]	12600 mg/l Daphnia magna (Water flea)		
LOEC (chronic)	> 79 mg/l		
NOEC (chronic)	≥ 79 mg/l		

# 12.2. Persistence and degradability

Galva Shine	
Persistence and degradability	Not established. No data is available on the degradability of this product.

# 12.3. Bioaccumulative potential

Galva Shine		
Partition coefficient n-octanol/water (Log Kow)	Not applicable	
xylene (1330-20-7)		
Partition coefficient n-octanol/water (Log Pow)	3,1	
ethyl acetate (141-78-6)		
Partition coefficient n-octanol/water (Log Pow)	0,7	
ethylbenzene (100-41-4)		
Partition coefficient n-octanol/water (Log Pow)	3,6	
4-morpholinecarbaldehyde (4394-85-8)		
Partition coefficient n-octanol/water (Log Pow)	-1,32	
acetone; propan-2-one; propanone (67-64-1)		
Partition coefficient n-octanol/water (Log Pow)	-0,24	

# 12.4. Mobility in soil

No additional information available

# 12.5. Results of PBT and vPvB assessment

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

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#### 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) : 2 (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
4.1. UN number or ID n	umber			
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
4.2. UN proper shipping	g name			
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
ransport document descri	iption			
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard c	class(es)			
2.1	2.1	2.1	2.1	2.1
2	2		2	2
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental haz	ards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary informatio	n available			

#### 14.6. Special precautions for user

### Overland transport

Classification code (ADR) : 5

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

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

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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

Limited quantities (IMDG)

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

· 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

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) : MP9

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

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#### 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 : 550 g/l

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

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Acetone	67-64-1	2914 11 00	ex 3824 99 92
Aluminium, powders	7429-90-5	7603 10 00; ex 7603 20 00	

Please see https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives\_en

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

Contains no 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)

# 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 and acronyms:		
ADN	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	

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

Full text of H- and EUH-statements:		
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4	
Aerosol 1	Aerosol, Category 1	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3	
Asp. Tox. 1	Aspiration hazard, Category 1	
EUH066	Repeated exposure may cause skin dryness or cracking.	
EUH208	Contains 4-morpholinecarbaldehyde (4394-85-8). May produce an allergic reaction.	

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Full text of H- and EUH-statements:	
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
Flam. Sol. 1	Flammable solids, Category 1
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H229	Pressurised container: May burst if heated.
H261	In contact with water releases flammable gases.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2

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