

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

1.1. Product identifier

Product name : GALVANISING ZINC RICH
UFI : VYKY-F85U-C006-J4HG
Product code : BDS001313AE
Vaporizer : Aerosol

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Paints

1.3. Details of the supplier of the safety data sheet

Supplier

CRC Industries Europe UK Limited
Wylds Road
Castlefield Industrial Estate
TA6 4DD Bridgwater Somerset
United Kingdom
T +44 1278 727200, F +44 1278 425644
hse.uk@crcind.com, www.crcind.com

Only Representative

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 : +44 1278 727200
Office hours: 9-17h CET

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
Hazardous to the aquatic environment – Chronic Hazard, H411
Category 2
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. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H411 - 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.

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P280 - Wear protective gloves/eye 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 and/or vPvB substances $\geq 0.1\%$ 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 substance(s) are 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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methylal substance with national workplace exposure limit(s) (GB)	CAS-No.: 109-87-5 EC-No.: 203-714-2 REACH-no: 01-2119664781-31	50 – 75	Flam. Liq. 2, H225
Carbon dioxide (CO ₂) (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 124-38-9	5 – 10	Press. Gas (Comp.), H280
zinc powder— zinc dust (stabilised)	CAS-No.: 7440-66-6 EC-No.: 231-175-3 EC Index-No.: 030-001-01-9 REACH-no: 01-2119467174-37	5 – 10	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
n-butyl acetate substance with national workplace exposure limit(s) (GB); 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: 01-2119485493-29	1 – 5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
1-methoxy-2-propanol; monopropylene glycol methyl ether substance with national workplace exposure limit(s) (GB); 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	1 – 5	Flam. Liq. 3, H226 STOT SE 3, H336
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	EC-No.: 920-750-0 REACH-no: 01-2119473851-33	1 – 5	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066
xylene substance with national workplace exposure limit(s) (GB); 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	1 – 5	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

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
aluminium powder (stabilised) substance with national workplace exposure limit(s) (GB)	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-002-00-1 REACH-no: 01-2119529243-45	1 – 5	Water-react. 2, H261 Flam. Sol. 1, H228
zinc oxide	CAS-No.: 1314-13-2 EC-No.: 215-222-5 EC Index-No.: 030-013-00-7 REACH-no: 01-2119463881-32	< 1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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 Annex I, item 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 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 eyes with water as a precaution. 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 after skin contact	: Repeated exposure may cause skin dryness or cracking.
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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.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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.

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".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wear personal protective equipment. Ensure good ventilation of the work station. 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. Pressurized container: Do not pierce or burn, even after use. 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 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

National occupational exposure and biological limit values

Carbon dioxide (CO ₂) (124-38-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Carbon dioxide
IOEL TWA	9000 mg/m ³
	5000 ppm

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Carbon dioxide (CO₂) (124-38-9)	
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	Carbon dioxide
WEL TWA (OEL TWA)	9150 mg/m ³
	5000 ppm
WEL STEL (OEL STEL)	27400 mg/m ³
	15000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Methylal (109-87-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Dimethoxymethane
WEL TWA (OEL TWA)	3160 mg/m ³
	1000 ppm
WEL STEL (OEL STEL)	3950 mg/m ³
	1250 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
n-butyl acetate (123-86-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	n-Butyl acetate
IOEL TWA	241 mg/m ³
	50 ppm
IOEL STEL	723 mg/m ³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
United Kingdom - Occupational Exposure Limits	
Local name	Butyl acetate
WEL TWA (OEL TWA)	724 mg/m ³
	150 ppm
WEL STEL (OEL STEL)	966 mg/m ³
	200 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1-Methoxypropanol-2
IOEL TWA	375 mg/m ³
	100 ppm
IOEL STEL	568 mg/m ³
	150 ppm

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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	1-Methoxypropan-2-ol
WEL TWA (OEL TWA)	375 mg/m ³
	100 ppm
WEL STEL (OEL STEL)	560 mg/m ³
	150 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
xylene (1330-20-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Xylene, mixed isomers, pure
IOEL TWA	221 mg/m ³
	50 ppm
IOEL STEL	442 mg/m ³
	100 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	Xylene
WEL TWA (OEL TWA)	220 mg/m ³ o-,m-,p- or mixed isomers
	50 ppm o-,m-,p- or mixed isomers
WEL STEL (OEL STEL)	441 mg/m ³ o-,m-,p- or mixed isomers
	100 ppm o-,m-,p- or mixed isomers
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
United Kingdom - Biological limit values	
Local name	Xylene, o-, m-, p- or mixed isomers
BMGV	650 mmol/mol Creatinine Parameter: methyl hippuric acid - Medium: urine - Sampling time: Post shift
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
aluminium powder (stabilised) (7429-90-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Aluminium
WEL TWA (OEL TWA)	2 mg/m ³ alkyl compounds
	2 mg/m ³ salts, soluble
	10 mg/m ³ metal, inhalable dust
	4 mg/m ³ metal, respirable dust

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aluminium powder (stabilised) (7429-90-5)	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
DNEL and PNEC	
zinc powder— zinc dust (stabilised) (7440-66-6)	
PNEC (Water)	
PNEC aqua (freshwater)	14.4 µg/l
PNEC aqua (marine water)	7.2 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	146.9 mg/kg dwt
PNEC sediment (marine water)	162.2 mg/kg dwt
PNEC (Soil)	
PNEC soil	83.1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 µg/l
n-butyl acetate (123-86-4)	
PNEC (Water)	
PNEC aqua (freshwater)	0.18 mg/l
PNEC aqua (marine water)	0.018 mg/l
PNEC aqua (intermittent, freshwater)	0.36 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.981 mg/kg dwt
PNEC sediment (marine water)	0.0981 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.0903 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	35.6 mg/l
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	553.5 mg/m ³
Acute - local effects, inhalation	553.5 mg/m ³
Long-term - systemic effects, dermal	183 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	369 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	33 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	43.9 mg/m ³
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

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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
PNEC aqua (intermittent, freshwater)	100 mg/l
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
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	773 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2035 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	699 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	608 mg/m ³
Long-term - systemic effects, dermal	699 mg/kg bodyweight/day
xylene (1330-20-7)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	442 mg/m ³
Acute - local effects, inhalation	442 mg/m ³
Long-term - systemic effects, dermal	212 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	221 mg/m ³
Long-term - local effects, inhalation	221 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	260 mg/m ³
Acute - local effects, inhalation	260 mg/m ³
Long-term - systemic effects, oral	12.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	65.3 mg/m ³
Long-term - systemic effects, dermal	125 mg/kg bodyweight/day
Long-term - local effects, inhalation	65.3 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.327 mg/l
PNEC aqua (marine water)	0.327 mg/l
PNEC aqua (intermittent, freshwater)	0.327 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	12.46 mg/kg dwt
PNEC sediment (marine water)	12.46 mg/kg dwt

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xylene (1330-20-7)	
PNEC (Soil)	
PNEC soil	2.31 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	6.58 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/m ³
Long-term - local effects, inhalation	13.3 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	4.17 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8.93 mg/m ³
Long-term - systemic effects, dermal	4.17 mg/kg bodyweight/day
Long-term - local effects, inhalation	13.3 mg/m ³
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

8.2. Exposure controls

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.

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

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

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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. Vinyl polyalcohol protective gloves.

Respiratory protection

Respiratory protection:

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

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.

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	: CO2 propelled liquid.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: No data available
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
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: Not available
pH	: 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
Density	: 0.931 g/cm ³ at 20 °C
Relative density	: 0.93 at 20 °C
Relative vapour density at 20°C	: > 1
Particle characteristics	: Not applicable

9.2. Other information

Information with regard to physical hazard classes

% of flammable ingredients : 75 – 100 %

Other safety characteristics

VOC content : 870 g/l

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

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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.

Hardening time : Not applicable.

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)

Methylal (109-87-5)

LD50 oral rat	6423 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight

zinc powder— zinc dust (stabilised) (7440-66-6)

LD50 oral rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 5.41 mg/l/4h

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

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

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

LD50 oral	> 5840 mg/kg bodyweight
LD50 dermal	> 2920 mg/kg bodyweight
LC50 Inhalation - Rat	> 23.3 mg/l/4h

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xylene (1330-20-7)	
LD50 oral	4300 mg/kg bodyweight
LD50 dermal rabbit	12126 mg/kg bodyweight
LC50 Inhalation - Rat [ppm]	> ppm
aluminium powder (stabilised) (7429-90-5)	
LD50 oral rat	> 15900 mg/kg bodyweight
zinc oxide (1314-13-2)	
LD50 oral rat	7950 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	2500 mg/l
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
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
n-butyl acetate (123-86-4)	
pH	6.2
4-morpholinecarbaldehyde (4394-85-8)	
pH	10
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
n-butyl acetate (123-86-4)	
pH	6.2
4-morpholinecarbaldehyde (4394-85-8)	
pH	10
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: 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)
Reproductive toxicity	: 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	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
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.
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)

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Methylal (109-87-5)	
LOAEC (inhalation, rat, vapour, 90 days)	1000 mg/l/6h/day
NOAEC (inhalation, rat, vapour, 90 days)	2000 mg/l/6h/day
n-butyl acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
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
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
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)

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Vaporizer	Aerosol
Methylal (109-87-5)	
Viscosity, kinematic	0.371 mm ² /s
n-butyl acetate (123-86-4)	
Viscosity, kinematic	0.83 mm ² /s
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
Viscosity, kinematic	1.848 mm ² /s
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	
Viscosity, kinematic	0.715 – 0.786 mm ² /s

11.2. Information on other hazards

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 substance(s) are 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 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

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Methylal (109-87-5)	
LC50 - Fish [1]	> 1000 mg/l
EC50 - Crustacea [1]	> 1200 mg/l
EC50 72h - Algae [1]	9120 mg/l
EC50 96h - Algae [1]	874.12 mg/l
ErC50 algae	9120 mg/l
NOEC (chronic)	150.5 mg/l
NOEC chronic fish	450281 mg/l
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
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
LC50 - Fish [1]	6812 mg/l
LC50 - Fish [2]	20800 mg/l
EC50 - Crustacea [1]	21100 – 25900 mg/l
EC50 - Other aquatic organisms [1]	2954 mg/l
ErC50 algae	> 1000 mg/l
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	
LC50 - Fish [1]	> 3 mg/l
EC50 - Crustacea [1]	4.6 mg/l Daphnia magna (Water flea)
LOEC (chronic)	0.32 mg/l Daphnia magna (21 d)
NOEC (chronic)	0.17 mg/l Daphnia magna (21 d)
aluminium powder (stabilised) (7429-90-5)	
LC50 - Fish [1]	> 100 mg/l
EC50 - Other aquatic organisms [2]	> 100 mg/l
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
12.2. Persistence and degradability	
GALVANISING ZINC RICH	
Persistence and degradability	Not established. No data is available on the degradability of this product.

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12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Kow)	Not applicable
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Carbon dioxide (CO₂) (124-38-9)

Partition coefficient n-octanol/water (Log Pow)	0.83
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Methylal (109-87-5)

Partition coefficient n-octanol/water (Log Pow)	0
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zinc powder— zinc dust (stabilised) (7440-66-6)

Partition coefficient n-octanol/water (Log Pow)	-0.47
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n-butyl acetate (123-86-4)

Partition coefficient n-octanol/water (Log Pow)	2.3
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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

Bioconcentration factor (BCF REACH)	< 100
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Partition coefficient n-octanol/water (Log Pow)	0.37
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Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Partition coefficient n-octanol/water (Log Pow)	4.85
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xylene (1330-20-7)

Partition coefficient n-octanol/water (Log Pow)	3.1
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4-morpholinecarbaldehyde (4394-85-8)

Partition coefficient n-octanol/water (Log Pow)	-1.32
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

GALVANISING ZINC RICH

Results of PBT assessment	Contains no PBT and/or vPvB substances $\geq 0.1\%$ 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 substance(s) are 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) : 0.06 (Fluorinated greenhouse gases - (EC) No 2024/573)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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European List of Waste (LoW, EC 2000/532) : 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 number				
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.1, (D), ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1950 Aerosols, flammable, 2.1, ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information 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 and handling (ADR) : CV9, CV12
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

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Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP200
Special packing provisions (IMDG)	: PP87, L2
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)	: 2
Special provisions for carriage – Packages (RID)	: W14
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW12
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

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)

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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)

Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items: Aluminium powder (7429-90-5).

VOC Directive (2004/42)

VOC content : 870 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 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)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations 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

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Abbreviations and acronyms:	
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 disruptor

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 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
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.
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
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.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.

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Full text of H- and EUH-statements:	
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 (Comp.)	Gases under pressure : Compressed gas
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
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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