SDS ATTACHMENT

PLEASE ATTACH THIS COMPLETED SHEET TO THE SDS FOR:

PRODUCT:	**ZG-90 SILVER**
SDS DATE:	**16-Oct-23**

1. Supplier:

Tradegear Ltd
Level 1, 99 Clarence Street
Riccarton, Christchurch 8011
New Zealand
Phone: 0800 22 44 34 or +64 3 341 8055
Fax: 0800 22 11 51 or +64 9 522 8833
24 hr emergency contact: +64 21 510 622

Website: www.tradegear.co.nz
Email: office@tradegear.co.nz

Emergency Information: National Poison Centre: 0800 764 766 (0800 POISON)

2 & 15. Hazards Identification & Regulatory Requirements:

Product Name: **Product Use:**	**ZG-90 SILVER** Paint (professional use)
Group Standard, Approval Number	Aerosols (Flammable) Group Standard 2020 - HSR002515 All ingredients are listed on the New Zealand Inventory of Chemicals (NZIoC)
GHS Classification: [Note: classification based on the CRC Industries SDS]	Aerosol Category 1 Eye irritation Category 2 Specific target organ toxicity – single exposure Category 3, narcotic effects Hazardous to the aquatic environment chronic Category 2
Hazard Statement and Precautions, including Class 9 statements where applicable:  **Danger**	Extremely flammable aerosol. Pressurised container: May burst if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Keep out of reach of children. 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. Avoid breathing vapours/spray. Use only outdoors or in a well-ventilated area. Protect from sunlight. Do not expose to temperatures exceeding 50°C.
Tolerable Exposure Limit or Environmental Exposure Limit:	None applied to this product of its ingredients.

ZG-90 SILVER

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 24/05/2024 Revision date: 16/10/2023 Supersedes version of: 07/02/2020 Version: 2.0

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

1.1. Product identifier

Product name : ZG-90 SILVER
UFI : VX0X-F825-F00M-U6SN
Product code : BDS002214AE
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 : Paints

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 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

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aerosol, Category 1	H222;H229
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol. May cause drowsiness or dizziness. Causes serious eye irritation. 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 GHS07 GHS09

Signal word (CLP) : Danger

Contains : n-butyl acetate; acetone; propan-2-one; propanone; Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics; 1-methoxy-2-propanol; monopropylene glycol methyl ether; Hydrocarbons, C9, aromatics

Hazard statements (CLP) : H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
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.
P261 - Avoid breathing vapours/spray.
P271 - Use only outdoors or in a well-ventilated area.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501 - Dispose of contents/container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements : EUH066 - Repeated exposure may cause skin dryness or cracking.
EUH208 - Contains 4-morpholinecarbaldehyde (4394-85-8). May produce an allergic reaction.

2.3. Other hazards

Contains no PBT and/or 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 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

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
dimethyl ether (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 115-10-6 EC-No.: 204-065-8 EC Index-No.: 603-019-00-8 REACH-no: 01-2119472128-37	50 – 75	Flam. Gas 1, H220 Press. Gas (Liq.), H280
n-butyl acetate substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 123-86-4 EC-No.: 204-658-1 EC Index-No.: 607-025-00-1 REACH-no: 01-2119485493-29	10 – 25	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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: 01-2119471330-49	10 – 25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
1-methoxy-2-propanol; monopropylene glycol methyl ether substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 107-98-2 EC-No.: 203-539-1 EC Index-No.: 603-064-00-3 REACH-no: 01-2119457435-35	1 – 5	Flam. Liq. 3, H226 STOT SE 3, H336
zinc oxide substance with national workplace exposure limit(s) (BE)	CAS-No.: 1314-13-2 EC-No.: 215-222-5 EC Index-No.: 030-013-00-7 REACH-no: 01-2119463881-32	1 – 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	EC-No.: 919-857-5 REACH-no: 01-2119463258-33	≤ 2,5	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066
Hydrocarbons, C9, aromatics	CAS-No.: 128601-23-0 EC-No.: 918-668-5 REACH-no: 01-2119455851-35	≤ 2,5	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
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. Seek medical attention if irritation develops.

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

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

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

Symptoms/effects : May cause drowsiness or dizziness.

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

Symptoms/effects after eye contact : Eye irritation.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.
Explosion hazard : Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire : During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Firefighting instructions : Move containers from fire area if it can be done without personal risk. Use standard firefighting procedures and consider the hazards of other involved materials.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear appropriate protective equipment and clothing during clean-up.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Mechanically recover the product. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Following product recovery, flush area with water. Take up small spills with dry chemical absorbent. Clean surface thoroughly to remove residual contamination.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid prolonged exposure. Handle in accordance with good industrial hygiene and safety procedures.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

dimethyl ether (115-10-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Dimethylether
IOEL TWA	1920 mg/m³
	1000 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Belgium - Occupational Exposure Limits	
Local name	Oxyde de diméthyle # Dimethylether
OEL TWA	1920 mg/m³
	1000 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021

n-butyl acetate (123-86-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	n-Butyl acetate
IOEL TWA	241 mg/m³
	50 ppm
IOEL STEL	723 mg/m³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
Belgium - Occupational Exposure Limits	
Local name	Acétate de n-butyle # n-Butylacetaat
OEL TWA	238 mg/m³
	50 ppm
OEL STEL	712 mg/m³
	150 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021

acetone; propan-2-one; propanone (67-64-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetone
IOEL TWA	1210 mg/m³

acetone; propan-2-one; propanone (67-64-1)	
	500 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Belgium - Occupational Exposure Limits	
Local name	Acétone # Aceton
OEL TWA	594 mg/m³
	246 ppm
OEL STEL	1187 mg/m³
	492 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021

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/m³
	100 ppm
IOEL STEL	568 mg/m³
	150 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Belgium - Occupational Exposure Limits	
Local name	1-Méthoxy-2-propanol # 1-Methoxy-2-propanol
OEL TWA	184 mg/m³
	50 ppm
OEL STEL	369 mg/m³
	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

zinc oxide (1314-13-2)	
Belgium - Occupational Exposure Limits	
Local name	Zinc (oxyde de) (fraction alvéolaire) # Zinkoxide (inadembare fractie)
OEL TWA	2 mg/m³
OEL STEL	10 mg/m³
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023

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

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

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

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

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

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

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

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

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

8.2.3. Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Grey.
Appearance	:	DME 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
Auto-ignition temperature	:	Not available
Decomposition temperature	:	> 200 °C
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	:	0,973 g/cm³ at 20 °C
Relative density	:	0,97 at 20 °C
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

% of flammable ingredients : 75 – 100 %

9.2.2. Other safety characteristics

VOC content	:	685 g/l (Cat.II B(e) VOC max 840 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)

dimethyl ether (115-10-6)	
LC50 Inhalation - Rat	308,5 mg/l/4h
LC50 Inhalation - Rat [ppm]	164000 ppm

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

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

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

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

zinc oxide (1314-13-2)	
LD50 oral rat	7950 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	2500 mg/l

Hydrocarbons, C9, aromatics (128601-23-0)	
LD50 oral rat	3592 mg/kg
LD50 dermal rabbit	> 3160 mg/kg bodyweight
LC50 Inhalation - Rat	> 6,193 mg/l/4h

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 : Causes serious eye irritation.
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)
STOT-single exposure : May cause drowsiness or dizziness.

n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.

acetone; propan-2-one; propanone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
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, C9, aromatics (128601-23-0)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.

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

n-butyl acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight

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

Hydrocarbons, C9, aromatics (128601-23-0)	
NOAEL (oral, rat, 90 days)	600 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)

ZG-90 SILVER	
Vaporizer	Aerosol

n-butyl acetate (123-86-4)	
Viscosity, kinematic	0,83 mm²/s

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
Viscosity, kinematic	1,33 mm²/s

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or 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 %

11.2.2. Other information

No additional information available

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.
Not rapidly degradable

dimethyl ether (115-10-6)	
LC50 - Fish [1]	> 4,1 g/l
EC50 - Crustacea [1]	> 4,4 g/l Daphnia magna (Water flea)
EC50 96h - Algae [1]	154917 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

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

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

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

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
EC50 - Other aquatic organisms [1]	2954 mg/l
ErC50 algae	> 1000 mg/l

Hydrocarbons, C9, aromatics (128601-23-0)	
LC50 - Fish [1]	9,2 mg/l
EC50 - Crustacea [1]	3,2 mg/l
EC50 72h - Algae [1]	2,6 – 2,9 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

ZG-90 SILVER	
Persistence and degradability	Not established. No data is available on the degradability of this product.

12.3. Bioaccumulative potential

ZG-90 SILVER	
Partition coefficient n-octanol/water (Log Kow)	Not applicable

dimethyl ether (115-10-6)	
Partition coefficient n-octanol/water (Log Pow)	0,07

n-butyl acetate (123-86-4)	
Partition coefficient n-octanol/water (Log Pow)	2,3

acetone; propan-2-one; propanone (67-64-1)	
Partition coefficient n-octanol/water (Log Pow)	-0,24

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
Bioconcentration factor (BCF REACH)	< 100
Partition coefficient n-octanol/water (Log Pow)	0,37

4-morpholinecarbaldehyde (4394-85-8)	
Partition coefficient n-octanol/water (Log Pow)	-1,32

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

ZG-90 SILVER	
Results of PBT assessment	Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or 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) : 1 (Fluorinated greenhouse gases - (EC) No 2024/573)

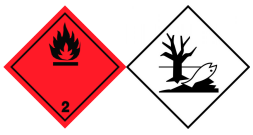
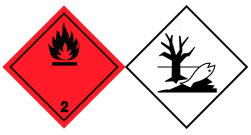
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
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	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)	:	1l
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
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)	:	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

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 : 685 g/l (Cat.II B(e) VOC max 840 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 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

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

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Acetone		67-64-1	2914 11 00	Category 3		Annex I

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	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

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

Full text of H- and EUH-statements:	
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

Full text of H- and EUH-statements:	
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains 4-morpholinecarbaldehyde (4394-85-8). May produce an allergic reaction.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis