

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

ZZ83-0000-OA0
Version 1.0

[Z] ZowoSmart®
Revision date 12 Aug 2025

Print date 12 Aug 2025

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

1.1 Product identifier

Trade name/designation

ZZ83-0000-OA0 [Z] ZowoSmart®
ReleaseAgent
UFI: U6HQ-20PM-N008-2SXM

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

Relevant identified uses

Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Supplier

Berger-Zobel GmbH
Coating Systems
Maybachstr. 2 Telephone: +49 6359 8005-0
67269 Grünstadt E-mail: info@berger-zobel.de
Germany Website: www.berger-zobel.de

Department responsible for information

E-mail (competent person) Sicherheitsdaten@berger-zobel.de

1.4 Emergency telephone number

Emergency telephone number +49 700 24112112
24 hr. emergency phone number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Aerosol 1 H229 Pressurised container: May burst if heated.
Aerosol 1 H222 Extremely flammable aerosol.
STOT SE 3 Narcotic effects H336 May cause drowsiness or dizziness.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms



GHS02 GHS07 GHS09

Signal word

Danger

Hazard statements

H229 Pressurised container: May burst if heated.
H222 Extremely flammable aerosol.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

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.
P273 Avoid release to the environment.
P391 Collect spillage.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Hazard components for labelling

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not applicable

Supplemental hazard information

not applicable

2.3 Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients.

3.2 Mixtures

Description

Hazardous ingredients

CAS No. EC No. Index No.	Substance name REACH No. Classification according to Regulation (EC) No 1272/2008 [CLP]	weight-%
- 920-750-0 -	Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%) 01-2119473851-33-XXXX Flam. Liq. 2 H225 / Asp. Tox. 1 H304 / STOT SE 3 H336 / Aquatic Chronic 2 H411	35,0 < 50,0
- 927-241-2 -	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics 01-2119471843-32-XXXX Flam. Liq. 3 H226 / Asp. Tox. 1 H304 / STOT SE 3 H336 / Aquatic Acute 3 H402 / Aquatic Chronic 3 H412 ATE (dermal): >= 3,160 mg/kg	5,00 < 7,00

Remark

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

Following inhalation

In case of irregular breathing or respiratory arrest provide artificial respiration. Remove casualty to fresh air and keep warm and at rest.

Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3 Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO₂), Powder, spray mist, (water)

Unsuitable extinguishing media

Strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

For containment

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

For cleaning up

Clean using cleansing agents. Do not use solvents.

6.4 Reference to other sections

Safe handling: see section 7

Personal protection equipment: refer to section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. Personal protection equipment: see section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Advices on general occupational hygiene

When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrsiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Storage class LGK2B - Aerosol dispensers and lighters

Further information on storage conditions

Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3 Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

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CAS No.	Substance name	Source	Long-term /short-term (Spitzenbegrenzung)
115-10-6	Dimethylether	WEL	766 / 958 (-) mg/m³

Additional information

Long-term: Long-term occupational exposure limit value
short-term: short-term occupational exposure limit value

Biological limit values

No data available

DNEL worker

CAS No.	Substance name	DNEL type	DNEL value
-	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	Long-term – inhalation, systemic effects	871 mg/m³
-	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	Long-term - dermal, systemic effects	77 mg/kg bw/day
-	Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)	DNEL long-term dermal (systemic)	773 mg/kg
-	Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)	DNEL long-term inhalative (systemic)	2,035 mg/m³

DNEL Consumer

CAS No.	Substance name	DNEL type	DNEL value
-	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	Long-term – inhalation, systemic effects	185 mg/m³
-	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	Long-term - dermal, systemic effects	46 mg/kg bw/day
-	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	Long-term - oral, systemic effects	46 mg/kg bw/day
-	Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)	DNEL long-term dermal (systemic)	699 mg/kg
-	Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)	DNEL long-term inhalative (systemic)	608 mg/m³

8.2 Exposure controls

Provide good ventilation. This can be achieved with local or room suction.

Personal protection equipment

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Hand protection

Suitable material: NBR (Nitrile rubber)
Thickness of the glove material >= 0.4 mm
Breakthrough time >= 480 min

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin.
Recommended glove articles: EN ISO 374

Skin protection

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Eye glasses with side protection: EN 166

Body protection

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. Anti-static clothing including shoes are recommended.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	transparent
Odour	characteristic
pH at 20 °C	not determined
Melting point/freezing point	-60 °C
	Source: Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)
Initial boiling point and boiling range	-24.8 °C
	Source: Dimethylether
Flash point	not determined
flammability	Extremely flammable aerosol.
Lower explosion limit at 20°C	0.6 Vol-%
	Source: Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics
Upper explosion limit at 20°C	32 Vol-%
	Source: Dimethylether
Vapour pressure at 20°C	2,410.761 mbar
Relative vapour density	not applicable
Density at 20 °C	0.71 kg/l
Water solubility at 20°C	practically insoluble
Partition coefficient: n-octanol/water	see section 12
Ignition temperature in °C	>= 200 °C
	Source: Kohlenwasserstoffe C7-C9, n-Alkane, Isoalkane, Cyclene, (Benzolgehalt <0,1%)
Decomposition temperature	not determined
Viscosity at 40 °C	not determined
particle characteristics	not applicable

9.2

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity

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Based on available data, the classification criteria are not met.

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics
LD50: dermal $\geq$ 3,160 mg/kg

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Overall assessment on CMR properties

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: Headache, Dizziness, fatigue, amyosthenia, Dizziness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Acute (short-term) toxicity to algae and cyanobacteria

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics

EL50: (Pseudokirchneriella subcapitata): 1,000 mg/L (72 h)

EL50: (Pseudokirchneriella subcapitata): $> 1,000$ mg/L (72 h)

NOELR: (Pseudokirchneriella subcapitata): 1 mg/L (72 h)

Acute (short-term) toxicity to crustacea

EL50: (Daphnia magna (Big water flea)): > 22 mg/L (48 h)

Chronic (long-term) fish toxicity

(Oncorhynchus mykiss (Rainbow trout)):

Chronic (long-term) toxicity to aquatic invertebrate

NOELR: (Daphnia magna (Big water flea)): 0.317 mg/L (21 d)

Toxicity to microorganisms

1.065 mg/L (48 h)

12.2 Persistence and degradability

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics

Biodegradation = 89 % (28 d)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water ≥ 1.99 (Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)

12.4 Mobility in soil

No information available.

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12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Do not empty into drains; dispose of this material and its container in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Waste codes/waste designations according to EWC/AVV

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Other disposal recommendations

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1 UN number or ID number

UN 1950

14.2 UN proper shipping name

Land transport (ADR/RID)

Aerosols, flammable

Sea transport (IMDG)

Aerosols, flammable

Air transport (ICAO-TI / IATA-DGR)

Aerosols, flammable

14.3 Transport hazard class(es)

Land transport (ADR/RID)	2.1
Sea transport (IMDG)	2.1
Air transport (ICAO-TI / IATA-DGR)	2.1

14.4 Packing group

not applicable

14.5 Environmental hazards

Land transport (ADR/RID)	ENVIRONMENTALLY HAZARDOUS
Sea transport (IMDG)	Marine pollutant

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

14.8 Additional information

Land transport (ADR/RID)

Tunnel restriction code: D
Limited quantity (LQ): 1 I
Hazard identification number (Kemler No.): 23

Sea transport (IMDG)

EmS-No.: F-D, S-U
Limited quantity (LQ): 1 I

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Air transport (ICAO-TI / IATA-DGR)

not applicable

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no.: 03, 40

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC value: 661 g/l

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

Hazard categories / Named dangerous substances

This product is not classified according to Directive 2012/18/EU.

National regulations

Observe in addition any national regulations!

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

List of relevant hazard statements and/or precautionary statements from sections 2 to 15

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H402	Harmful to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Aerosol 1	On basis of test data.
Aerosol 1	On basis of test data.
STOT SE 3 Narcotic effects	Calculation method.
Aquatic Chronic 2	Calculation method.

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

OEL: Occupational Exposure Limit Value

BLV: Biological limit values

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging

CMR: Carcinogenic, Mutagenic and Reprotoxic

DIN: German Institute for Standardization / German industrial standard

DNEL: Derived No-Effect Level

EAKV: European Waste Catalogue Directive

EC: Effective Concentration

EC: European Community

EN: European Standard

EU/EEA: European Economic Area

IATA-DGR: International Air Transport Association – Dangerous Goods Regulations

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

ICAO-TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG Code: International Maritime Code for Dangerous Goods

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ISO: International Organization for Standardization

LC: Lethal Concentration

LD: Lethal Dose

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MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships

OECD: Organisation for Economic Cooperation and Development

PBT: persistent, bioaccumulative, toxic

PNEC: Predicted No Effect Concentration

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

UN: United Nations

VOC: Volatile Organic Compounds

vPvB: very persistent and very bioaccumulative

Indication of changes

* Data changed compared with the previous version.