

Article No.: ZZ83000A0A10 [Z] ZowoSmart®
Print date: 25.04.2023 Revision date: 17.03.2023
Version: 7.0002 Issue date: 17.03.2023

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

1.1. product identifiers

Article No. (manufacturer/supplier) ZZ83000A0A10
Trade name/designation [Z] ZowoSmart®
ReleaseAgent

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

Relevant identified uses:

paint and/or paint related material
Reserved for industrial and professional use.

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

Berger-Zobel GmbH
Coating Systems Telephone: +49 6359 / 8005-0
Maybachstraße 2 Telefax: +49 6359 / 8005-170
67269 Grünstadt

Department responsible for information:

Laboratory
E-mail Sicherheitsdaten@berger-zobel.de

1.4. Emergency telephone number

24-hour emergency number: +49 700 24112112
(BLG)
24-hour emergency number in side USA: +1 872 5888271 or +11 49 700 24112112 (BLG)

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

2.2. Label elements

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

Hazard pictograms



Danger

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
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

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

Supplemental hazard information

not applicable

2.3. Other hazards

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No information available.

Other information: If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description

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

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
204-065-8 115-10-6	01-2119472128-37-XXXX dimethyl ether	25 - 50
603-019-00-8 920-750-0	compressed gas H280 / Flam. Gas 1 H220 01-2119473851-33-XXXX Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics STOT SE 3 H336 / Asp. Tox. 1 H304 / Aquatic Chronic 2 H411 / Flam. Liq. 2 H225	25 - 50
927-241-2	01-2119471843-32-XXXX Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics Skin Irrit. 3 H316 / STOT SE 3 H336 / Asp. Tox. 1 H304 / Aquatic Acute 3 H402 / Aquatic Chronic 3 H412 / Flam. Liq. 3 H226	5 - 7,5

Additional information

Full text of classification: 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.

In case of inhalation

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

Following skin contact

Take off immediately all contaminated clothing. 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.

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

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

Suitable extinguishing media:

alcohol resistant foam, carbon dioxide, 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.

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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

Keep away from 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

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). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to 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.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

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. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

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

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 25 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. 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. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values:

dimethyl ether

Index No. 603-019-00-8 / EC No. 204-065-8 / CAS No. 115-10-6

WEL, TWA: 766 mg/m³; 400 ppm

WEL, STEL: 958 mg/m³; 500 ppm

Additional information

TWA : Long-term occupational exposure limit value

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STEL : short-term occupational exposure limit value
Ceiling : peak limitation

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: Butyl caoutchouc (butyl rubber)
Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

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

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

Eye/face protection

Wear closely fitting protective glasses in case of splashes.

Body protection

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	refer to chapter 1.
Odour:	characteristic
Odour threshold:	not applicable
Melting point/freezing point:	-60 °C Source: Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
Initial boiling point and boiling range:	-25 °C Source: dimethyl ether
Flammability:	Extremely flammable aerosol.
Lower and upper explosion limit:	
Lower explosion limit:	2,7 Vol-%
Upper explosion limit:	32 Vol-% Source: dimethyl ether
Flash point:	-41 °C
Auto-ignition temperature:	>=200 °C Source: Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
Decomposition temperature:	not applicable
pH at 20 °C:	not applicable
Viscosity at °C:	Handelsware
Solubility(ies):	
Water solubility at 20 °C:	insoluble
Partition coefficient: n-octanol/water:	see section 12
Vapour pressure at 20 °C:	5102 mbar

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Method: calculated.
Source: dimethyl ether

Density and/or relative density:

Density at 20 °C:

0,71 g/cm³

Method: ISO 2811, part 3

Relative vapour density:

not applicable

particle characteristics:

not applicable

9.2. **Other information**

Solid content:

6,86 weight-%

solvent content:

Organic solvents:

93 weight-%

Water:

0 weight-%

Solvent separation test:

< 3 weight-% (ADR/RID)

SECTION 10: Stability and reactivity

10.1. **Reactivity**

No information available.

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**

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

not applicable

10.6. **Hazardous decomposition products**

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

Acute toxicity

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

oral, LD50, Rat: > 5000 mg/kg

Method: OECD 401

dermal, LD50, Rabbit: > 5000 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: > 4951 mg/L (4 h)

Method: OECD 403

Skin corrosion/irritation; Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

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

; Evaluation No sensitising effect known

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

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

Specific target organ toxicity (single exposure), drowsiness

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Aspiration hazard

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

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, drowsiness, 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.

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

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

There is no information available on the preparation itself .

Do not allow to enter into surface water or drains.

12.1. Toxicity

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

Daphnia toxicity, EL50, Daphnia magna (Big water flea) 22 - 46 mg/L (48 h)

Algae toxicity, EL50, Pseudokirchneriella subcapitata: > 1000 mg/L (72 h)

Algae toxicity, NOELR, Pseudokirchneriella subcapitata: < 1 mg/L (72 h)

Fish toxicity, LL50, Oncorhynchus mykiss (Rainbow trout) 10 - 30 mg/L (96 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

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

: 89 % (28 D)

12.3. Bioaccumulative potential

Toxicological data are not available.

12.4. Mobility in soil

Toxicological data are not available.

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

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC

150110* packaging containing residues of or contaminated by dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package Recommendation

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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
Air transport (ICAO-TI / IATA-DGR): Aerosols, flammable
- 14.3. **Transport hazard class(es)**
2.1
- 14.4. **Packing group**
not applicable
- 14.5. **Environmental hazards**
Land transport (ADR/RID) UMWELTGEFÄHRDEND
Marine pollutant p
- 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
- Further information**
- Land transport (ADR/RID)**
Tunnel restriction code D
- Sea transport (IMDG)**
EmS-No. F-D, S-U
- 14.7. **Maritime transport in bulk according to IMO instruments**
No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

- 15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- EU legislation**
- Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]**
Category: P3a FLAMMABLE AEROSOLS
Quantity 1: 150 t / Quantity 2: 500 t
Category: E2 Hazardous to the aquatic environment in Category Chronic 2
Quantity 1: 200 t / Quantity 2: 500 t
- Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]**
VOC-value (in g/L) ISO 11890-2: 661
VOC-value (in g/L) ASTM D2369: 661
- National regulations**
- Restrictions of occupation**
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
- Other information:**
- Switzerland:
Volatile organic compounds (VOC) content in percent by weight: 50
- Denmark:
PR-No.:
- MAL code (MAL code in mixture):
- 15.2. **Chemical Safety Assessment**
For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

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Full text of classification in section 3

compressed gas / H280	Gases under pressure	Contains gas under pressure; may explode if heated.
Flam. Gas 1 / H220	flammable gases	Extremely flammable gas.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Skin Irrit. 3 / H316	Skin corrosion/irritation	Causes mild skin irritation.
Aquatic Acute 3 / H402	Hazardous to the aquatic environment	Harmful to aquatic organisms.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.

Classification procedure

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

Aerosol 1	Aerosol	On basis of test data.
Aerosol 1	Aerosol	On basis of test data.
STOT SE 3	STOT-single exposure	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
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
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
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
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
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.