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

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

1.1. **product identifiers**

Article No. (manufacturer/supplier)	747
Trade name/designation	ALU-ZINK Spray UFI: PE7V-457V-U99G-W2V0

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

1.3. **Details of the supplier of the safety data sheet**

supplier (manufacturer/importer/downstream user/distributor)
Vismara Unternehmungen CH-5000 Aarau www.farbladen.ch

Department responsible for information:
laboratory Manager

E-mail (competent person)	info@knuchel.ch

1.4. **Emergency telephone number**

Emergency telephone number	145 (+41 (0)44 251 51 51)

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.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
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.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
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.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/attention.

P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Keep locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container to industrial incineration plant.

Hazard components for labelling

Ethyl acetate

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. **Other hazards**

No information available.

SECTION 3: Composition/information on ingredients

3.2. **Mixtures**

Description solvent-based alkyd resin, containing the following hazardous substances:

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

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
205-500-4 141-78-6 607-022-00-5	01-2119475103-46 Ethyl acetate Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336 / EUH066	15 - 25
204-658-1 123-86-4 607-025-00-1	01-2119485493-29 n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336 / EUH066	15 - 25
200-662-2 67-64-1 606-001-00-8	01-2119471330-49 Acetone Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336 / EUH066	15 - 25
231-175-3 7440-66-6 030-001-00-1	 zinc powder - zinc dust (stabilized) Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	1 - 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.

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 30 °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:

Ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
WEL, TWA: 734 mg/m3; 200 ppm
WEL, STEL: 1468 mg/m3; 400 ppm

Acetone
Index No. 606-001-00-8 / EC No. 200-662-2 / CAS No. 67-64-1
WEL, TWA: 1210 mg/m3; 500 ppm
WEL, STEL: 3620 mg/m3; 1500 ppm

Additional information

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

DNEL:

Ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
DNEL long-term dermal (systemic), Workers: 63 mg/kg
DNEL acute inhalative (local), Workers: 1468 mg/m³
DNEL acute inhalative (systemic), Workers: 1468 mg/m³
DNEL long-term inhalative (local), Workers: 734 mg/m³
DNEL long-term inhalative (systemic), Workers: 734 mg/m³
DNEL long-term oral (repeated), Consumer: 4,5 mg/kg
DNEL long-term dermal (systemic), Consumer: 37 mg/kg bw/day
DNEL acute inhalative (local), Consumer: 734 mg/m³
DNEL acute inhalative (systemic), Consumer: 734 mg/m³
DNEL long-term inhalative (local), Consumer: 367 mg/m³
DNEL long-term inhalative (systemic), Consumer: 367 mg/m³

Acetone
Index No. 606-001-00-8 / EC No. 200-662-2 / CAS No. 67-64-1
DNEL long-term dermal (systemic), Workers: 186 mg/kg bw/day
DNEL acute inhalative (local), Workers: 2420 mg/m³
DNEL long-term inhalative (systemic), Workers: 1210 mg/m³
DNEL long-term oral (repeated), Consumer: 62 mg/kg bw/day
DNEL long-term dermal (systemic), Consumer: 62 mg/kg bw/day
DNEL long-term inhalative (systemic), Consumer: 200 mg/m³

n-butyl acetate
Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4
DNEL short-term oral (acute), Workers:
DNEL long-term inhalative (systemic), Workers: 480 mg/m³
DNEL long-term inhalative (systemic), Consumer: 102,34 mg/m³

PNEC:

Ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
PNEC aquatic, freshwater: 0,24 mg/L
PNEC aquatic, marine water: 0,024 mg/L
PNEC aquatic, intermittent release: 1,65 mg/L
PNEC sediment, freshwater: 1,15 mg/kg
PNEC sediment, marine water: 0,115 mg/kg
PNEC, soil: 0,148 mg/kg
PNEC sewage treatment plant (STP): 650 mg/L
PNEC Secondary Poisoning: 200 mg/kg food

Acetone
Index No. 606-001-00-8 / EC No. 200-662-2 / CAS No. 67-64-1
PNEC aquatic, freshwater: 10,6 mg/L

PNEC aquatic, marine water: 1,06 mg/L
PNEC aquatic, intermittent release: 21 mg/L
PNEC sediment, freshwater: 30,4 mg/kg
PNEC sediment, marine water: 3,04 mg/kg
PNEC, soil: 29,5 mg/kg
PNEC sewage treatment plant (STP): 100 mg/L

n-butyl acetate
Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4
PNEC aquatic, freshwater: 0,18 mg/L
PNEC aquatic, marine water: 0,018 mg/L
PNEC aquatic, intermittent release: 0,36 mg/L
PNEC sediment, freshwater: 0,981 mg/kg Sediment dry weight
PNEC sediment, marine water: 0,0981 mg/kg Sediment dry weight
PNEC, soil: 0,0903 mg/kg Sediment dry weight
PNEC sewage treatment plant (STP): 35,6 mg/L

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. 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: NBR (Nitrile 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 label**
Odour:	**characteristic**
Odour threshold:	**not applicable**
Melting point/freezing point:	**not applicable**
Initial boiling point and boiling range:	**-42 °C** Source: Hydrocarbons, C3-4
Flammability:	**Extremely flammable aerosol.**
Lower and upper explosion limit:	
Lower explosion limit:	**1.9 Vol-%**
Upper explosion limit:	**13 Vol-%** Source: Acetone
Flash point:	**-100 °C** Method: DIN 53213
Auto-ignition temperature:	**370 °C** Source: n-butyl acetate

Decomposition temperature:	**not applicable**
pH at 20 °C:	**not applicable**
Cinematic viscosity (40°C):	**< 80 mm²/s**
Viscosity at 20 °C:	**20 s 4 mm** Method: DIN 53211
Solubility(ies):	
Water solubility at 20 °C:	**partially soluble**
Partition coefficient: n-octanol/water:	**see section 12**
Vapour pressure at 20 °C:	**8300 mbar** Source: Hydrocarbons, C3-4
Density and/or relative density:	
Density at 20 °C:	**0.74 g/cm³**
Relative vapour density:	**not applicable**
particle characteristics:	**not applicable**

9.2. **Other information**

Solid content:	**13 weight-%**
solvent content:	
Organic solvents:	**87 weight-%**
Water:	**0 weight-%**

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

Ethyl acetate
oral, LD50, Rat: 5620 mg/kg
dermal, LD50, Rabbit: > 20000 mg/kg
oral, LD50, Rabbit: 4934
Method: OECD 401
inhalative (vapours), LC0, Rat: 29,3 (4 h)
inhalative (vapours), LCLo, Rat: > 6000 ppm (6 h)
inhalative (vapours), LD50, Rabbit, male: > 2000 mg/kg

Acetone
oral, LD50, Rat: 5800 mg/kg
Method: OECD 401
May cause mouth and throat pain, nausea, vomiting, dizziness, headache and unconsciousness.
dermal, LD50, Rabbit: 7400 mg/kg
inhalative (vapours), LC50, Rat: 76 mg/L (4 h)

May cause pain in nose and throat, nausea, dizziness, headache, loss of responsiveness and unconsciousness at high concentrations.

n-butyl acetate
oral, LD50, Rat: 10760 mg/kg
Method: OECD 423
dermal, LD50, Rabbit: 14112 mg/kg
Method: OECD 402
inhalative (dust and mist), LC50, Rat: 23,4 mg/L (4 h)
Method: OECD 403

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes serious eye irritation.

Ethyl acetate
Skin (4 h)
No skin irritation (rabbit). Degreases the skin and makes it dry and rough. Prolonged or repeated skin contact can lead to dermatitis.
eyes
Moderate eye irritation (rabbit).

n-butyl acetate
Skin, Rabbit (4 h)
Method: OECD 404
No skin irritation
eyes
Method: OECD 405
No eye irritation

Respiratory or skin sensitisation

Ethyl acetate
Skin, Guinea pig: ; Evaluation not sensitising.
Method: OECD 406
Maximization test

n-butyl acetate
Skin, Guinea pig: ; Evaluation not sensitising.
Method: OECD 406
Mouse mouse ear swelling test (MEST)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Ethyl acetate
Germ cell mutagenicity; Evaluation In vitro tests showed no mutagenic effects.
Carcinogenicity; Evaluation Didn't show any carcinogenic effects in animal tests.
Reproductive toxicity; Evaluation No reproductive toxicity
Genotoxicity in vitro; Evaluation negative
(Chromosome aberration test in vitro; CHO (Chinese hamster ovaries) cells; with and without metabolic activation) (OECD Test Guideline 473).; (Back mutation test on bacteria; Salmonella typhimurium) (OECD test guideline 471).
Genotoxicity in vivo; Evaluation negative
Method: OECD 474
(Chromosome aberration test in vivo; Chinese hamster, male and female) (Oral).

n-butyl acetate
Germ cell mutagenicity; Evaluation Ames test negative.

STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

Ethyl acetate
Specific target organ toxicity (single exposure)
Inhalation; central nervous system; May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)
No data available
Repeated dose toxicity: 900 mg/kg
Method NOAEL
Repeated dose toxicity, Rat: 3600 mg/kg (92 d)

Method LOAEL
oral
Repeated dose toxicity, Rat: 350 ppm (94 d)
Method NOEC
inhalative (vapours); 5 days/week
Repeated dose toxicity, Rat: 350 ppm (94 d)
Method LOEC:
inhalative (vapours); 5 days/week

n-butyl acetate
Specific target organ toxicity (single exposure)
central nervous system; May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)
human; Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).; Steam in high concentration leads to unconsciousness.

Aspiration hazard

Ethyl acetate
Aspiration hazard
no classification

n-butyl acetate
Aspiration hazard; Evaluation No classification for aspiration toxicity

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]
Do not allow to enter into surface water or drains.

12.1. **Toxicity**

Ethyl acetate
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 230 mg/L (96 h)
Flow test; US-EPA
Daphnia toxicity, EC50, Daphnia magna: 610 mg/L (48 h)
Daphnia toxicity, EC50, Daphnia cucullata (Helmet water flea): 165 mg/L (48 h)
Algae toxicity, EC50, Desmodesmus subspicatus: 5600 mg/L (48 h)
Method: DIN 38412
Static test; end; Rate of growth
Algae toxicity, NOEC, Desmodesmus subspicatus: > 100 mg/L (72 h)
Method: OECD 201
Static test; end; Rate of growth
Bacteria toxicity, EC10, Photobacterium phosphoreum: 1650 mg/L (15 min.)
Static test; end; Rate of growth
Bacteria toxicity, EC50, Photobacterium phosphoreum: 5870 mg/L (15 min.)
Static test; end; Rate of growth

Acetone
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 5540 mg/L (96 h)
Fish toxicity, LC50, Alburnus alburnus (alburnum): 11000 mg/L (96 h)
Daphnia toxicity, LC50, Daphnia pulex (water flea): 8800 mg/L (48 h)
Algae toxicity, NOEC, Prorocentrum minimum: 430 mg/L (96 h)

Bacteria toxicity, EC12, Activated sludge: 1000 mg/L (30 min)
Method: OECD 209
Static test; end; respiratory inhibition
Fish toxicity, LC50, Leuciscus idus (golden orfe): 7500 mg/L (96 h)
Daphnia magna, EC50, Daphnia magna: > 100 mg/L
Fish toxicity, EC50, Lepomis macrochirus (Bluegill): 8300 mg/L (96 h)
Fish toxicity, EC50, Selenastrum capricornutum: 7500 mg/L (96 h)
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 8120 mg/L (96 h)
Method: OECD 203

n-butyl acetate
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 18 mg/L (96 h)
Method: OECD 203
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 44 mg/L (48 h)
Algae toxicity, ErC50
Algae toxicity, EC50, Desmodesmus subspicatus: 647,7 mg/L (72 h)
(Growth inhibition)
Algae toxicity, NOEC, Desmodesmus subspicatus: 200 mg/L
Bacteria toxicity, IC50, Tetrahymena: 356 mg/L (40 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

Ethyl acetate
Fish toxicity, NOEC, Pimephales promelas (fathead minnow): > 9,65 mg/L (32 d)
Method: OECD 211
semistatic

Acetone
Daphnia toxicity, NOEC, Daphnia pulex (water flea): 2212 mg/L 0 - 2212 mg/L (28 d)
end; reproduction
Daphnia toxicity, LOEC:, Daphnia magna: 2212 mg/L (28 d)
Daphnia magna, NOEC, Daphnia magna 1106 - 2212 mg/L (28 d)

12.2. **Persistence and degradability**

Ethyl acetate
Persistence and degradability: Evaluation The product evaporates easily from the water surface.
Biodegradation: 79 percent (20 d); Evaluation Readily biodegradable (according to OECD criteria).
Method: OECD 301D
Related to: Biochemical oxygen demand

Acetone
Biodegradation: 91 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria).
Method: OECD 301B

n-butyl acetate
Persistence and degradability: Evaluation No data available
Biodegradation: 83 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria).
Method: OECD 301D
aerobic.

12.3. **Bioaccumulative potential**

Ethyl acetate
Partition coefficient: n-octanol/water:
Distribution coefficient n-octanol/water (log KOW): 0,68 ; Evaluation Bioaccumulation is not to be expected.

Acetone
Distribution coefficient n-octanol/water (log KOW): -0,24

n-butyl acetate
Distribution coefficient n-octanol/water (log KOW):
No data available

Bioconcentration factor (BCF)

Ethyl acetate
Bioconcentration factor (BCF): 30

Acetone
Bioconcentration factor (BCF): 3

Bioaccumulation is not to be expected.

12.4. **Mobility in soil**

Ethyl acetate
Water: Evaluation Swims on water and does not dissolve.
Air: Evaluation Slightly volatile, quickly distributed in the air.

Acetone
soil:
Mobile in the ground
Water:
The product is water soluble.
Air:
Product is easily volatile.

n-butyl acetate
:
No data 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. Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC
160504* Gases in pressure containers (including halons) containing hazardous substances
*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package
Recommendation
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
in packages <= 5 litres	not restricted 2.10.2.7

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 2010/75/EU on industrial emissions [Industrial Emissions Directive]
VOC-value (in g/L): 643

National regulations

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.

15.2. **Chemical Safety Assessment**
For the following substances of this mixture a chemical safety assessment has been carried out:

EC No. CAS No.	Designation	REACH No.
205-500-4 141-78-6	Ethyl acetate	01-2119475103-46
204-658-1 123-86-4	n-butyl acetate	01-2119485493-29
200-662-2 67-64-1	Acetone	01-2119471330-49

SECTION 16: Other information

Full text of classification in section 3

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.

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.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
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.