Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830

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

1.1. **Product identifier**

Article No. (manufacturer/supplier): 141.0450.0
Trade name/designation: Pakmarker Spray

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

Uses advised against:
There is no information available for use is discouraged facing.

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

supplier (manufacturer/importer/downstream user/distributor)
Interlab BVD
Europalaan 21
NL-4645 Hp Putte
Telephone: +31 (0) 76 50 22 540

Dept. responsible for information:
Labor: +31 (0) 76 50 22 540
E-mail (competent person): info@interlab-bv.nl

1.4. **Emergency telephone number**

National Poison phone number Information Centrum (NVIC): +31 30-2748888
Exclusively intended for healthcare professionals in acute poisoning.

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.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.

2.2. **Label elements**

The product is classified and labelled according to EC directives or corresponding national laws.

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.
H373	May cause damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H412	Harmful 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 label before use.
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.
P260	Do not breathe mist.

P260	Do not breathe vapour.
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.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P314	Get medical advice/attention if you feel unwell.
P331	Do NOT induce vomiting.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P402 + P404	Store in a dry place. Store in a closed container.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Hazard components for labelling

Acetone
hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)

Supplemental Hazard information (EU)

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains cobalt(II) octoate; Fatty acids, tall-oil esters with polyethylene glycol mono(hydrogen maleate), compds. with amides from diethylendiaminand tall-oil fatty acids. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition / information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Description Aerosol

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

EC No. CAS No. INDEX No.	REACH No. Designation classification: // Remark	Wt %
200-827-9 74-98-6 601-003-00-5	01-2119486944-21-xxxx propane Flam. Gas 1 H220 / Press. Gas	12,5 - 20
200-662-2 67-64-1 606-001-00-8	01-2119471330-49-xxxx Acetone Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	12,5 - 20
203-448-7 106-97-8 601-004-00-0	01-2119474691-32-xxxx butane Flam. Gas 1 H220 / Press. Gas	10 - 12,5
200-857-2 75-28-5 601-004-00-0	01-2119475791-29-xxxx isobutane Flam. Gas 1 H220 / Press. Gas	10 - 12,5
201-159-0 78-93-3 606-002-00-3	01-2119457290-43 butanone Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	5 - 10
919-446-0 64742-82-1	01-2119458049-33-xxxx hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%) STOT SE 3 H336 / STOT RE 1 H372 / Asp. Tox. 1 H304 / Aquatic Chronic 2 H411 / Flam. Liq. 3 H226	2,5 - 5
919-857-5 64742-48-9 649-327-00-6	01-2119463258-33 Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics STOT SE 3 H336 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226	2,5 - 5

215-535-7 1330-20-7 601-022-00-9	01-2119488216-32-xxxx Xylene Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335 / STOT RE 2 H373 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226	2,5 - 5
251-846-4 34140-91-5	oleic acid,compound with (Z)-N-octadec-9-enylpropane-1,3-diamine(2:1) Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT RE 2 H373 / Aquatic Acute 1 H400 (M = 10) / Aquatic Chronic 2 H411	< 0,5
222716-38-3	Fatty acids, tall-oil esters with polyethylene glycol mono(hydrogen maleate), compds. with amides from diethylendiaminand tall-oil fatty acids Acute Tox. 4 H302 / Eye Irrit. 2 H319 / Skin Irrit. 2 H315 / Skin Sens. 1 H317 / STOT RE 2 H373 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	< 0,5
205-250-6 136-52-7	01-2119524678-29-0005 cobalt(II) octoate Eye Irrit. 2 H319 / Skin Sens. 1A H317 / Repr. 1B H360 / Aquatic Acute 1 H400 / Aquatic Chronic 3 H412	< 0,5

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
In case of inhalationDo 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.

After 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. **Mammalian cells (with metabolic activation)**
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. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

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 (TRBS 2153)".

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 5 °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:

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

butane
INDEX No. 601-004-00-0 / EC No. 203-448-7 / CAS No. 106-97-8

WEL, TWA: 1450 mg/m3; 600 ppm
WEL, STEL: 1810 mg/m3; 750 ppm

butanone
INDEX No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3

WEL, TWA: 600 mg/m3; 200 ppm
WEL, STEL: 899 mg/m3; 300 ppm

Xylene
INDEX No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

WEL, TWA: 220 mg/m3; 50 ppm
WEL, STEL: 441 mg/m3; 100 ppm
Remark: (may be absorbed through the skin)

BMGV, TWA: 650 mmol/mol creatinine
Remark: methyl hippuric acid; urine; end of exposure or end of shift

Additional information

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

DNEL:

Xylene
INDEX No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7
DNEL long-term dermal (systemic), Workers: 180 mg/kg
DNEL acute inhalative (local), Workers: 289 mg/m³
DNEL acute inhalative (systemic), Workers: 289 mg/m³
DNEL long-term inhalative (systemic), Workers: 77 mg/m³
DNEL long-term oral (repeated), Consumer: 1,6 mg/kg
DNEL long-term dermal (systemic), Consumer: 108 mg/kg
DNEL acute inhalative (local), Consumer: 174 mg/m³
DNEL acute inhalative (systemic), Consumer: 174 mg/m³
DNEL long-term inhalative (systemic), Consumer: 14,8 mg/m³

Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics
INDEX No. 649-327-00-6 / EC No. 919-857-5 / CAS No. 64742-48-9
DNEL long-term dermal (systemic), Workers: 300 mg/kg
DNEL acute inhalative (systemic), Workers: 871 mg/m³
DNEL long-term oral (repeated), Consumer: 125 mg/kg
DNEL long-term dermal (systemic), Consumer: 300 mg/kg
DNEL long-term inhalative (systemic), Consumer: 900 mg/m³

hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
EC No. 919-446-0 / CAS No. 64742-82-1
DNEL long-term dermal (systemic), Workers: 44 mg/kg
DNEL long-term inhalative (systemic), Workers: 330 mg/m³
DNEL long-term oral (repeated), Consumer: 26 mg/kg bw/day
DNEL long-term dermal (systemic), Consumer: 26 mg/kg
DNEL long-term inhalative (systemic), Consumer: 71 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
DNEL acute inhalative (local), Workers: 2420 mg/m³
DNEL acute inhalative (systemic), 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

butanone
INDEX No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3
DNEL long-term dermal (systemic), Workers: 1161 mg/kg
DNEL acute inhalative (systemic), Workers: 600 mg/m³
DNEL long-term oral (repeated), Consumer: 31 mg/kg
DNEL acute dermal, short-term (local), Consumer: 412 mg/kg
DNEL acute inhalative (systemic), Consumer:

PNEC:

Xylene
INDEX No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7
PNEC aquatic, freshwater: 0,327 mg/l
PNEC aquatic, marine water: 0,327 mg/l

PNEC aquatic, intermittent release: 0,327 mg/l
PNEC sediment, freshwater: 12,46 mg/kg
PNEC sediment, marine water: 12,46 mg/kg
PNEC, soil: 2,31 mg/kg
PNEC sewage treatment plant (STP): 6,58 mg/l

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

butanone
INDEX No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3
PNEC aquatic, freshwater: 55,8 mg/l
PNEC aquatic, marine water: 55,8 mg/l
PNEC aquatic, intermittent release: 55,8 mg/l
PNEC, soil: 22,5 mg/kg
PNEC sewage treatment plant (STP): 709 mg/l
PNEC Secondary Poisoning: 1000 mg/kg

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.
Suitable respiratory protection apparatus: Respiratory protection is required for not sufficiently ventilated working places and during the spraying processing.

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 (maximum wearing 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**

Appearance:

Physical state:	**Liquid**
Colour:	**refer to label**
Odour:	**characteristic**
Odour threshold:	**not applicable**
pH at 20 °C:	**not applicable**

Melting point/freezing point:	**-95 °C** Source: Acetone
Initial boiling point and boiling range:	**not determined**
Flash point:	**-108 °C** Method: DIN 53213-1 (08/2002: replaced by EN ISO 1523)
Evaporation rate:	**not applicable**
flammability	
Burning time (s):	**not applicable**
Upper/lower flammability or explosive limits:	
Lower explosion limit:	**0,6 Vol-%** Source: Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics
Upper explosion limit:	**13 Vol-%** Source: Acetone
Vapour pressure at 20 °C:	**1732,2816 mbar**
Vapour density:	**not applicable**
Relative density:	
Density at 20 °C:	**1,01 g/cm³** Method: ISO 2811, part 1
Solubility(ies):	
Water solubility (g/L) at 20 °C:	**partially soluble**
Partition coefficient: n-octanol/water:	**see section 12**
Auto-ignition temperature:	**235 °C** Source: hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
Decomposition temperature:	**not applicable**
Viscosity at °C:	**Aerosol**
Explosive properties:	**not applicable**
Oxidising properties:	**not applicable**

9.2. **Other information**

Solid content (%):	**35,02 Wt %**
solvent content:	
Organic solvents:	**65 Wt %**
Water:	**0 Wt %**

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. Thermal decomposition can lead to the escape of irritating gases and vapours.Hazardous decomposition byproducts may form with exposure to high temperatures.

SECTION 11: Toxicological information

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

No data on preparation itself available.

11.1. **Information on toxicological effects**

Acute toxicity

Xylene
oral, LD50, Rat: 3523 mg/kg
dermal, LD50, Rabbit: 12126 mg/kg
inhalative (vapours), LC50, Rat: 27,5 mg/l (4 h)

Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics
oral, LD50, Rat: > 5000 mg/kg
dermal, LD50, Rabbit: > 5000 mg/kg
inhalative (vapours), LC50, Rat: > 5000 mg/l (4 h)

hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
oral, LD50, Rat: > 15000 mg/kg
Method: OECD 401
dermal, LD50, Rat: 3400 mg/kg
Method: OECD 402
inhalative (vapours), LC50, Rat: 13,1 mg/l (4 h)
Method: OECD 403

Acetone
oral, LD50, Rat: 5800 mg/kg
dermal, LD50, Rat: > 15800 mg/kg
dermal, LD50, Rabbit: > 2000 mg/kg
inhalative (vapours), LC50, Rat: 76 mg/l (4 h)
oral, NOAEL(C):, Rat: 900 mg/kg bw/day (90 D)
inhalative (vapours), NOAEC, Rat: 22500 mg/m³

butanone
oral, LD50, Rat: > 2193 mg/kg
dermal, LD50, Rabbit: > 5000 mg/kg
inhalative (vapours), LC50, Rat: 34,5 mg/l (4 h)

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes serious eye irritation.

butanone
eyes, Rabbit
Method: OECD 405

Respiratory or skin sensitisation

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

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.

May cause damage to organs through prolonged or repeated exposure.

Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics
Specific target organ toxicity (single exposure), drowsiness

hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
Specific target organ toxicity (repeated exposure)

Acetone
Specific target organ toxicity (single exposure), drowsiness evaluation May cause drowsiness or dizziness.

butanone
Specific target organ toxicity (single exposure), drowsiness

Aspiration hazard

May be fatal if swallowed and enters airways.

Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <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

EC No. CAS No.	Designation	Classification according to Regulation (EC) No 1272/2008 [CLP]
205-250-6 136-52-7	cobalt(II) octoate	Repr. 1B

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**

Xylene
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,6 mg/l 0 - 8,4 mg/l (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 1 mg/l 0 - 2,9 mg/l (48 h)
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: > 2,2 mg/l 0 - 4,9 mg/l (72 h)

hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 20 mg/l 0 - 30 mg/l (96 h)
Method: OECD 203
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 4,5 mg/l (48 h)
Method: OECD 202
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 4,1 mg/l (72 h)
Method: OECD 201

Acetone
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 5540 mg/l (96 h)
Daphnia toxicity, EC50, Daphnia pulex (water flea): 8800 mg/l (48 h)
Algae toxicity, ErC50, Algae: 100 mg/l (96 h)
Bacteria toxicity, Activated sludge: 1000 mg/l (30 m); evaluation Toxicity to microorganisms
Method: OECD 209

butanone
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 2993 mg/l (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 308 mg/l (48 h)
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 2029 mg/l (96 h)

Long-term Ecotoxicity

Harmful to aquatic life with long lasting effects.

hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)
Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 0,097 mg/l (21 D)
Method: OECD 211
Daphnia toxicity, LOEC, Daphnia magna (Big water flea): 0,203 mg/l (21 D)

12.2. **Persistence and degradability**

Acetone
, Biodegradation: 91 % (28 D); evaluation Readily biodegradable (according to OECD criteria).
Method: OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C
Chemical oxygen demand (COD): 2100 mg/g
Biochemical oxygen demand: 1900 mg/g (5 D)

12.3. **Bioaccumulative potential**

Acetone
Partition coefficient: n-octanol/water: -0,24

Bioconcentration factor (BCF)

Acetone
Bioconcentration factor (BCF): < 0 ; evaluation No indication of bioaccumulation potential.

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. **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.

Control report for waste code/ waste marking according to EAKV:
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
Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. **UN 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)	not applicable
Marine pollutant	not applicable

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. **Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

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

Directive 2010/75/EU on industrial emissions
VOC-value (in g/L): 654

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds
VOC product category: (Cat. B/e) ; VOC limit value: 840 g/l
Maximum VOC content (g/L) of the product in a ready to use condition: 654

National regulations

Restrictions of occupation
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Other information
Reserved for industrial and professional use.

VOC Switzerland (weight fraction in %) : 51

MAL-KODE:

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.
200-827-9 74-98-6	propane	01-2119486944-21-xxxx
200-662-2 67-64-1	Acetone	01-2119471330-49-xxxx
201-159-0 78-93-3	butanone	01-2119457290-43
919-446-0 64742-82-1	hydrocarbons, C9-C12, n-alkane, iso-alkane, cyclic, aromatic (2-25%)	01-2119458049-33-xxxx
919-857-5 64742-48-9	Hydrocarbons, C9-C13, n-alkanes, iso-alkanes, cyclens, <2% aromatics	01-2119463258-33
215-535-7 1330-20-7	Xylene	01-2119488216-32-xxxx
205-250-6 136-52-7	cobalt(II) octoate	01-2119524678-29-0005

SECTION 16: Other information

Full text of classification in section 3:

Flam. Gas 1 / H220	flammable gases	Extremely flammable gas.
Press. Gas	Gases under pressure	
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.
STOT RE 1 / H372	STOT-repeated exposure	Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
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. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.
Skin Sens. 1A / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Repr. 1B / H360	Reproductive toxicity	May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful 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.
STOT RE 2	STOT-repeated exposure	Calculation method.
Asp. Tox. 1	Aspiration hazard	Calculation method.
Aquatic Chronic 3	Hazardous to the aquatic environment	Calculation method.

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 chapter 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.