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

1.1 Product identifier

Gravelgard
UFI: DU6K-CYYN-C10A-N04M

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

1.2.1 Relevant uses

Corrosion protection

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

WAXOYL AG
Seewenweg 5
4153 Reinach / SWITZERLAND
Phone +41-61-28177 94
Fax +41-61-28177 85
Homepage www.waxoyl.com
E-mail info@waxoyl.ch

Address enquiries to

Technical information info@waxoyl.ch

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Aerosol 1: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.
Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.
Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.
STOT SE 3: H336 May cause drowsiness or dizziness.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictograms





Signal word DANGER

Contains: Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Hazard statements
H229 Pressurised container: May burst if heated.
H222 Extremely flammable aerosol.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122°F.
P280 Wear protective gloves / eye protection / face protection.
P261 Avoid breathing vapours / spray.
P271 Use only outdoors or in a well-ventilated area.
P312 Call a POISON CENTER / doctor if you feel unwell.
P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Human health dangers It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
25 - 50	Dimethyl ether
	CAS: 115-10-6, EINECS/ELINCS: 204-065-8, EU-INDEX: 603-019-00-8, Reg-No.: 01-2119472128-37-XXXX
	GHS/CLP: Flam. Gas 1: H220 - Press. Gas: H280
25 - 50	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
	EINECS/ELINCS: 927-510-4, Reg-No.: 01-2119475515-33-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Chronic 2: H411
1 - 10	Butanone
	CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
1 - 10	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
	EINECS/ELINCS: 920-750-0, EU-INDEX: 649-328-00-1, Reg-No.: 01-2119473851-33-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Aquatic Chronic 2: H411 - Asp. Tox. 1: H304 - STOT SE 3: H336
1 - 10	Cyclohexane
	CAS: 110-82-7, EINECS/ELINCS: 203-806-2, EU-INDEX: 601-017-00-1, Reg-No.: 01-2119463273-41-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 1, M-Factor (chronic): 1
1 - 10	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
< 2,5	Hydrocarbons, C9, aromatics
	EINECS/ELINCS: 918-668-5, Reg-No.: 01-2119455851-35-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - Aquatic Chronic 2: H411 - Asp. Tox. 1: H304 - STOT SE 3: H336 - STOT SE 3: H335
< 2,5	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
	EINECS/ELINCS: 921-024-6, Reg-No.: 01-2119475514-35-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Chronic 2: H411
< 1	n-Hexane
	CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Repr. 2: H361f - Asp. Tox. 1: H304 - STOT RE 2: H373 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Chronic 2: H411
	SCL [%]: >= 5: STOT RE 2: H373

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Remove person to fresh air and keep comfortable for breathing.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Drowsiness
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Bursting aerosols can be forcibly projected from a fire.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide suitable vacuuming at the processing area.

Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.

Do not eat, drink, smoke or take drugs at work.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.
Prevent penetration into the ground.

Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.

Keep in a cool place, heat causes increase in pressure and risk of bursting.
Keep container in a well-ventilated place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
EINECS/ELINCS: 927-510-4, Reg-No.: 01-2119475515-33-XXXX
Long-term exposure: 1200 mg/m³
Dimethyl ether
CAS: 115-10-6, EINECS/ELINCS: 204-065-8, EU-INDEX: 603-019-00-8, Reg-No.: 01-2119472128-37-XXXX
Long-term exposure: 400 ppm, 766 mg/m³
Short-term exposure (15-minute): 500 ppm, 958 mg/m³
Cyclohexane
CAS: 110-82-7, EINECS/ELINCS: 203-806-2, EU-INDEX: 601-017-00-1, Reg-No.: 01-2119463273-41-XXXX
Long-term exposure: 100 ppm, 350 mg/m³
Short-term exposure (15-minute): 300 ppm, 1050 mg/m³
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
Long-term exposure: 200 ppm, 730 mg/m³
Short-term exposure (15-minute): 400 ppm, 1460 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Long-term exposure: 200 ppm, 600 mg/m³, Sk, BmgV
Short-term exposure (15-minute): 300 ppm, 899 mg/m³
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
EINECS/ELINCS: 920-750-0, EU-INDEX: 649-328-00-1, Reg-No.: 01-2119473851-33-XXXX
Long-term exposure: 1200 mg/m³
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
EINECS/ELINCS: 921-024-6, Reg-No.: 01-2119475514-35-XXXX
Long-term exposure: 1200 mg/m³
Hydrocarbons, C9, aromatics
EINECS/ELINCS: 918-668-5, Reg-No.: 01-2119455851-35-XXXX
Long-term exposure: 100 mg/m³
n-Hexane
CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
Long-term exposure: 20 ppm, 72 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Dimethyl ether
CAS: 115-10-6, EINECS/ELINCS: 204-065-8, EU-INDEX: 603-019-00-8, Reg-No.: 01-2119472128-37-XXXX
Eight hours: 1000 ppm, 1920 mg/m³
Cyclohexane
CAS: 110-82-7, EINECS/ELINCS: 203-806-2, EU-INDEX: 601-017-00-1, Reg-No.: 01-2119463273-41-XXXX
Eight hours: 200 ppm, 700 mg/m³
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX

Eight hours: 200 ppm, 734 mg/m³
Short-term (15-minute): 400 ppm, 1468 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Eight hours: 600 mg/m³
Short-term (15-minute): 300 ppm, 900 mg/m³
n-Hexane
CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
Eight hours: 20 ppm, 72 mg/m³

DNEL

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
Industrial, dermal, Long-term - systemic effects, 773 mg/kg bw/d,
Industrial, inhalative, Long-term - systemic effects, 2035 mg/m³,
general population, inhalative, Long-term - systemic effects, 608 mg/m³,
general population, oral, Long-term - systemic effects, 699 mg/kg bw/d,
general population, dermal, Long-term - systemic effects, 699 mg/kg bw/d,
Hydrocarbons, C9, aromatics
Industrial, inhalative, Long-term - systemic effects, 150 mg/m³,
Industrial, dermal, Long-term - systemic effects, 25 mg/kg kg/d,
general population, oral, Long-term - systemic effects, 11 mg/kg bw/day,
general population, inhalative, Long-term - systemic effects, 32 mg/m³,
general population, dermal, Long-term - systemic effects, 11 mg/kg kg/d,
Dimethyl ether, CAS: 115-10-6
Industrial, inhalative, Long-term - systemic effects, 1894 mg/m³,
general population, inhalative, Long-term - systemic effects, 471 mg/m³,
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Industrial, dermal, Long-term - systemic effects, 300 mg/kg bw/d,
Industrial, inhalative, Long-term - systemic effects, 2085 mg/m³,
general population, dermal, Long-term - systemic effects, 149 mg/kg bw/d,
general population, inhalative, Long-term - systemic effects, 477 mg/m³,
general population, oral, Long-term - systemic effects, 149 mg/kg bw/d,
Butanone, CAS: 78-93-3
Industrial, inhalative, Long-term - systemic effects, 600 mg/m3,
Industrial, dermal, Long-term - systemic effects, 1161 mg/kg bw/d,
general population, oral, Long-term - systemic effects, 31 mg/kg bw/d,
general population, dermal, Long-term - systemic effects, 412 mg/kg bw/d (AF=2),
general population, inhalative, Long-term - systemic effects, 106 mg/m³ (AF=2),
Ethyl acetate, CAS: 141-78-6
Industrial, inhalative, Acute - systemic effects, 1468 mg/m³,
Industrial, inhalative, Long-term - systemic effects, 734 mg/m³,
Industrial, dermal, Long-term - systemic effects, 63 mg/kg bw/day,
Industrial, inhalative, Acute - local effects, 1468 mg/m³,
Industrial, inhalative, Long-term - local effects, 734 mg/m³,
general population, inhalative, Long-term - local effects, 367 mg/m³,
general population, oral, Long-term - systemic effects, 4,5 mg/kg bw/day,
general population, dermal, Long-term - systemic effects, 37 mg/kg bw/day,

general population, inhalative, Acute - systemic effects, 734 mg/m³,
general population, inhalative, Long-term - systemic effects, 367 mg/m³,
general population, inhalative, Acute - local effects, 734 mg/m³,
n-Hexane, CAS: 110-54-3
Industrial, dermal, Long-term - systemic effects, 11 mg/kg bw/day,
Industrial, inhalative, Long-term - systemic effects, 75 mg/m³,
general population, oral, Long-term - systemic effects, 4 mg/kg bw/day,
general population, dermal, Long-term - systemic effects, 5,3 mg/kg bw/day,
general population, inhalative, Long-term - systemic effects, 16 mg/m³,
Cyclohexane, CAS: 110-82-7
Industrial, dermal, Long-term - systemic effects, 2016 mg/kg bw/day,
Industrial, inhalative, Long-term - local effects, 700 mg/m³,
Industrial, inhalative, Acute - local effects, 700 mg/m³,
Industrial, inhalative, Long-term - systemic effects, 700 mg/m³,
general population, inhalative, Long-term - local effects, 206 mg/m³,
general population, inhalative, Acute - local effects, 412 mg/m³,
general population, dermal, Long-term - systemic effects, 1186 mg/kg bw/day,
general population, oral, Long-term - systemic effects, 59,4 mg/kg bw/day,
general population, inhalative, Long-term - systemic effects, 206 mg/m³,
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
Industrial, inhalative, Long-term - systemic effects, 2035 mg/m³,
Industrial, dermal, Long-term - systemic effects, 773 mg/kg bw/d,
general population, inhalative, Long-term - systemic effects, 608 mg/m³,
general population, dermal, Long-term - systemic effects, 699 mg/kg bw/d,
general population, oral, Long-term - systemic effects, 699 mg/kg bw/d,

PNEC

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
There are no PNEC values established for the substance.,
Hydrocarbons, C9, aromatics
There are no PNEC values established for the substance.,
Dimethyl ether, CAS: 115-10-6
seawater, 0,016 mg/L,
freshwater, 0,155 mg/L,
sewage treatment plants (STP), 160 mg/L,
sediment (freshwater), 0,681 mg/kg,
sediment (seawater), 0,069 mg/kg,
soil, 0,045 mg/kg,
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
There are no PNEC values established for the substance.,
Butanone, CAS: 78-93-3
oral (food), 1000 mg/kg food (AF=30),
sewage treatment plants (STP), 709 mg/l (AF=1),
sediment (freshwater), 284,7 mg/kg dw,
sediment (seawater), 284,7 mg/kg dw,
soil, 22,5 mg/kg dw,
freshwater, 55,8 mg/l (AF=1),
seawater, 55,8 mg/l (AF=1),

Ethyl acetate, CAS: 141-78-6
seawater, 0,024 mg/L,
sewage treatment plants (STP), 650 mg/L,
sediment (freshwater), 1,15 mg/kg,
sediment (seawater), 0,115 mg/kg,
soil, 0,148 mg/kg,
oral (food), 0,2 g/kg,
freshwater, 0,24 mg/L,
n-Hexane, CAS: 110-54-3
There are no PNEC values established for the substance.,
Cyclohexane, CAS: 110-82-7
sewage treatment plants (STP), 3,24 mg/l,
soil, 2,99 mg/kg,
sediment (seawater), 3,627 mg/kg,
sediment (freshwater), 3,627 mg/kg,
seawater, 0,207 mg/l,
freshwater, 0,207 mg/l,

8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation.
Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

Eye protection
Safety glasses. (EN 166:2001)

Hand protection
0,4mm Butyl rubber, >120 min (EN 374-1/-2/-3).
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection
Protective clothing (EN 340)

Other
Do not inhale gases/vapours/aerosols.
Avoid contact with eyes and skin.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Avoid contact during pregnancy/ while nursing.

Respiratory protection
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
none

Delimitation and monitoring of the environmental exposition
Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	aerosol
Color	black
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	ca. 3,3 Vol.%
Upper explosion limit	ca. 26,2 Vol.%
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	0,93 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not applicable
Auto-ignition temperature	not applicable
Decomposition temperature [°C]	not applicable
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Risk of bursting.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

Flammable gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Product
ATE-mix, oral, > 2000 mg/kg,

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
LD50, oral, Rat, > 5000 mg/kg,
Hydrocarbons, C9, aromatics
LD50, oral, Rat, 3492 mg/kg bw (OECD 401),
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
LD50, oral, Rat, >5840 mg/kg bw,
Ethyl acetate, CAS: 141-78-6
LD50, oral, Rabbit, 4934 mg/kg OECD 401,
n-Hexane, CAS: 110-54-3
LD50, oral, mouse, 5000 mg/kg (IUCLID),
Cyclohexane, CAS: 110-82-7
LD50, oral, Rat, > 5000 mg/kg,
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
LD50, oral, Rat, > 5800 mg/kg,

Acute dermal toxicity

Product
ATE-mix, dermal, > 2000 mg/kg,

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
LD50, dermal, Rabbit, > 2800 mg/kg,
Hydrocarbons, C9, aromatics
LD50, dermal, Rabbit, > 3160 mg/kg bw (OECD 402),
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
LD50, dermal, Rat, >2800 mg/kg bw,
Butanone, CAS: 78-93-3
LD50, dermal, Rabbit, > 5000 mg/kg,
Ethyl acetate, CAS: 141-78-6
LD50, dermal, Rabbit, > 20000 mg/kg,
n-Hexane, CAS: 110-54-3
LD50, dermal, Rabbit, 3000 mg/kg (IUCLID),
Cyclohexane, CAS: 110-82-7
LD50, dermal, Rabbit, > 2000 mg/kg,
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
LD50, dermal, Rabbit, > 3920 mg/kg,

Acute inhalational toxicity

Product
ATE-mix, inhalation (vapour), > 20 mg/l 4h,

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
LC50, inhalative, Rat, > 23,3 mg/l/4h,
Hydrocarbons, C9, aromatics
LC50, inhalative, Rat, > 10,2 mg/l/4h (OECD 403),
Dimethyl ether, CAS: 115-10-6
LC50, inhalative, Rat, 308 mg/l (4h),
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
LC50, inhalative, Rat, >23,3 g/L (4h),
Butanone, CAS: 78-93-3
LC50, inhalative, Rat, 34 mg/l/4h,
Ethyl acetate, CAS: 141-78-6
LC0, inhalation (vapour), Rat, 29,3 mg/L 4h,
LCLO, inhalation (vapour), Rat, > 6000 ppm 6h,
Cyclohexane, CAS: 110-82-7
LC50, inhalative, Rat, 13,9 mg/l 4h,
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
LC50, inhalative, Rat, > 25,2 mg/l 4h,

Serious eye damage/irritation

Irritant
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

Substance
Hydrocarbons, C9, aromatics
Rabbit, not irritating (OECD 405),
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Eye, Rabbit, OECD 404, reizend,
Cyclohexane, CAS: 110-82-7
Eye, Rabbit,
negativ,

Skin corrosion/irritation

Irritant
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

Substance
Hydrocarbons, C9, aromatics
Rabbit, not irritating (OECD 404),
Cyclohexane, CAS: 110-82-7
dermal, Rabbit,
reizend,

Respiratory or skin sensitisation

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Substance
Cyclohexane, CAS: 110-82-7
No information available.,

negativ,

Specific target organ toxicity — single exposure

Vapours may cause drowsiness and dizziness.
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Calculation method

Substance
Hydrocarbons, C9, aromatics
NOAEC, inhalation (vapour), Rat, 1500 ppm,
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
positiv,
Cyclohexane, CAS: 110-82-7
inhalative, Rat,

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Substance
Cyclohexane, CAS: 110-82-7
negative,
NOAEL, oral, Rat, 2,7 mg/L (90 Tage, Niere),
NOAEL, oral, Rat, 24 mg/L (90 Tage, Leber),

Mutagenicity

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Substance
Cyclohexane, CAS: 110-82-7
in vivo,
negativ,

Reproduction toxicity

Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Substance
Cyclohexane, CAS: 110-82-7
negativ,
NOAEL, inhalative, Rat, 24 mg/L,

Carcinogenicity

Does not contain a relevant substance that meets the classification criteria.
Based on the available information, the classification criteria are not fulfilled.
Toxicological data of complete product are not available.

Substance
Cyclohexane, CAS: 110-82-7
No information available.,

Aspiration hazard

Based on the available information, the classification criteria are not fulfilled.

General remarks

The determination of properties hazardous to health does not take the propellant or carrier material into account.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
EL50, (72h), Pseudokirchneriella subcapitata, 10 - 30 mg/l,
EL50, (48h), Daphnia magna, 3 mg/l,
NOELR, (72h), Pseudokirchneriella subcapitata, 10 mg/l,
LL50, (96h), Oncorhynchus mykiss, > 13,4 mg/l,
Hydrocarbons, C9, aromatics
EL50, (48h), Daphnia magna, 3,2 mg/l (OECD 202),
NOELR, (28d), Oncorhynchus mykiss, 1,23 mg/l,
NOELR, (21d), Daphnia magna, 2,14 mg/l,
LL50, (96h), Oncorhynchus mykiss, 9,2 mg/l (OECD 203),
ErL50, (72h), Pseudokirchneriella subcapitata, 2,9 mg/l (OECD 201),
Dimethyl ether, CAS: 115-10-6
EC50, (96h), Algae, 154.9 mg/L (ECOSAR v1.00),
NOEC, (96h), Poecilia reticulate, ≥4.1 g/L (NEN 6504 Water),
NOEC, (48h), Daphnia magna, ≥4.4 g/L (NEN 6501 Water),
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
EC50, (72h), Pseudokirchneriella subcapitata, 10 - 30 mg/l,
EC50, (48h), Daphnia magna, 3 mg/l,
NOEC, (21d), Daphnia magna, 0,17 mg/l,
NOELR, (72h), Pseudokirchneriella subcapitata, 10 mg/l,
LL50, (96h), Oncorhynchus mykiss, > 13,4 mg/l,
Butanone, CAS: 78-93-3
LC50, (96h), Pimephales promelas, 2990 mg/l (OECD 203),
EC50, (48h), Daphnia magna, 308 mg/l (OECD 202),
EC50, (72h), Pseudokirchneriella subcapitata, 1972 mg/l (OECD 201),
EC5, (16h), Pseudomonas putida, 1150 mg/l (DIN 38412),
Biological degradability:, 98% (28d) [OECD 301D],
Ethyl acetate, CAS: 141-78-6
LC50, (96h), Pimephales promelas, 230 mg/l,
EC50, (48h), Desmodesmus subspicatus, 5600 mg/l,
EC50, (48h), Daphnia magna, 610 mg/L,
NOEC, (72h), Desmodesmus subspicatus, > 100 mg/L OECD 201,
NOEC, (21d), Daphnia magna, 2,4 mg/L OECD 211,
n-Hexane, CAS: 110-54-3
LC50, (96h), Pimephales promelas, 2,5 mg/l (ECOTOX),
EC50, (48h), Daphnia magna, 2,1 mg/l (Lit),
Cyclohexane, CAS: 110-82-7
LC50, (48h), Leuciscus idus, 55 mg/l OECD 203,
EC50, (72h), Algae, 9,317 mg/l OECD 201,
EC50, (48h), Daphnia magna, 3,78 mg/l OECD 202,
NOEC, (72h), Algae, 0,94 mg/l OECD 201,
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane
EL50, (48h), Daphnia magna, 3 mg/l,
EL50, (72h), Pseudokirchneriella subcapitata, 30 - 100 mg/l,

NOEC, (21d), Daphnia magna, 0,17 mg/l,
LL50, (96h), Oncorhynchus mykiss, 11,4 mg/l,
LOEC, (21d), Daphnia magna, 0,32 mg/l,

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Disposal in an incineration plant in accordance with the regulations of the local authorities.

Waste no. (recommended) 160504* gases in pressure containers (including halons) containing dangerous substances

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances
150104

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	1950
Inland navigation (ADN)	1950
Marine transport in accordance with IMDG	1950
Air transport in accordance with IATA	1950

14.2 UN proper shipping name

Transport by land according to ADR/RID	Aerosols
- Classification Code	5F
- Label	
- ADR LQ	1 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D)
Inland navigation (ADN)	Aerosols
- Classification Code	5F
- Label	
Marine transport in accordance with IMDG	Aerosols (Cyclohexane, Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
- EMS	F-D, S-U
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Aerosols, flammable
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	2
Inland navigation (ADN)	2
Marine transport in accordance with IMDG	2.1
Air transport in accordance with IATA	2.1

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	>= 76 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H373 May cause damage to organs through prolonged or repeated exposure.
H361f Suspected of damaging fertility.
H335 May cause respiratory irritation.
H226 Flammable liquid and vapour.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H315 Causes skin irritation.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
H336 May cause drowsiness or dizziness.
H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H220 Extremely flammable gas.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Aerosol 1: H222 Extremely flammable aerosol. (Expert judgement) H229 Pressurised container: May burst if heated. (Bridging principle "Aerosols")
Asp. Tox. 1: H304 May be fatal if swallowed and enters airways. (Bridging principle "Aerosols")
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position	SECTION 2 been added: It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. SECTION 8 been added: Avoid contact during pregnancy/ while nursing. SECTION 8 been added: In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. SECTION 14 been added: Aerosols (Cyclohexane, Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)

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