

SAFETY DATA SHEET according to regulation 1907/2006

silco®**Product name: 4020 Z-Prime****Creation date: 18.11.2020, Revision: 05.05.2022, version: 3.0**

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name
4020 Z-Prime



<https://my.chemius.net/p/VmnD4G/en/pd/en>

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

Relevant identified uses
Corrosion protection agent

Uses advised against
No information.

1.3 Details of the supplier of the safety data sheet

Manufacturer
SILCO, D.O.O.
Šentrupert 5 a
3303 Gomilsko, Slovenia
+386 3 703 3180
msds@silco.si

1.4 Emergency Telephone Number

Emergency
112

Manufacturer
+386 3 703 3180

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Aerosol 1; H222 Extremely flammable aerosol.

Aerosol 1; H229.1 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; H335 May cause respiratory irritation.

STOT SE 3; H336 May cause drowsiness or dizziness.

Carc. 1B; H350.1B May cause cancer.

STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

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



Signal word: **Danger**

- H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
EUH208 Contains 2-butanone oxime. May produce an allergic reaction.
P102 Keep out of reach of children.
P202 Do not handle until all safety precautions have been read and understood.
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/vapours/spray.
P273 Avoid release to the environment.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P410 + P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F.
P501 Dispose of contents/container in accordance with national regulation.

Contains:
acetone
reaction mass of ethylbenzene and xylene
hydrocarbons C9 aromatics
2-butanone oxime

Special provisions
Restricted to professional users.

2.3 Other hazards
Vapors can form an explosive mixture with air.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	Notes for substances
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zinc powder - zinc dust (stabilized)	7440-66-6 231-175-3 030-001-01-9 01-2119467174-37	10-<25	Aquatic Acute 1; H400; M = 1 Aquatic Chronic 1; H410; M = 1	/	/
acetone	67-64-1 200-662-2 606-001-00-8 01-2119471330-49	10-25	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	/	/
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27	10-25	Flam. Gas 1; H220 Press. Gas; H280	/	C, S
reaction mass of ethylbenzene and xylene	- 905-588-0 - 01-2119486136-34	10-<15	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Acute Tox. 4; H332 STOT SE 3; H335 STOT RE 2; H373	STOT RE 2; H373; C ≥ 10%	/
hydrocarbons C9 aromatics	- 918-668-5 - 01-2119455851-35	10-<15	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H335 STOT SE 3; H336 Aquatic Chronic 2; H411	/	/
xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	2,5-<10	Flam. Liq. 3; H226 Acute Tox. 4; H312 Skin Irrit. 2; H315 Acute Tox. 4; H332	/	C
propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21	2,5-10	Flam. Gas 1; H220 Press. Gas; H280	/	U
reaction mass of ethylbenzene and m-xylene and p-xylene	- 905-562-9 - 01-2119555267-33	2,5-<10	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Acute Tox. 4; H332 STOT SE 3; H335 STOT RE 2; H373	/	/
2-butanone oxime	96-29-7 202-496-6 616-014-00-0 01-2119539477-28	<1	Acute Tox. 3; H301 Acute Tox. 4; H312 Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Dam. 1; H318 STOT SE 3; H336 Carc. 1B; H350.1B STOT SE 1; H370 STOT RE 2; H373	oral: ATE = 100 mg/kg bw dermal: ATE = 1100 mg/kg bw	/

Notes for substances

C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
S	This substance may not require a label according to Article 17 (see Section 1.3 of Annex I) (Table 3).
U	When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

SECTION 4: FIRST AID MEASURES

4.1 First aid measures

General notes

When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.

Following inhalation

Remove patient to fresh air - move out of dangerous area. Keep at rest in a position comfortable for breathing. Victim should rest in a warm place. If symptoms develop and persist, seek medical attention.

Following skin contact

Immediately remove contaminated clothing. Wash affected skin areas thoroughly with plenty of water and soap. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. If irritation does not stop, seek professional medical treatment!

Following ingestion

Not likely. Do not induce vomiting! Immediately consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Vapours may cause drowsiness and dizziness. Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation. Coughing, sneezing, nasal discharge, labored breathing. Symptoms include: headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness.

Following skin contact

Itching, redness, pain.

Following eye contact

Strongly irritates the eyes. Redness, tearing, pain.

Following ingestion

Not likely. May cause nausea/vomiting and diarrhea. May cause irritation of the digestive tract. Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area. Aspiration into the lungs causes coughing, shortness of breath and may lead to chemical pneumonia.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam. Extinguish large fires with water spray or alcohol-resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO₂).

5.3 Advice for firefighters

Protective actions

In case of fire evacuate the area. In case of fire or heating do not breathe fumes/vapours. In case of fire aerosols can explode and be propelled to considerable distances in different directions. Cool containers at risk with water spray. If possible remove containers from endangered area. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking!

Emergency procedures

Prevent access to unprotected personnel. Avoid contact with skin and eyes. Do not breathe vapour or mist.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems and ground water. If accidental large entry into water or ground occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

Ventilate the premises. Collect the spray cans and hand them over to an authorized waste disposal contractor. Release of liquid because of damaged aerosol can (release of large quantities): In case of bigger spill, dam the spillage, pump the liquid into appropriate labelled containers, absorb a residue with absorbent material and dispose of according to local regulations. Do not absorb spillage with sawdust or other combustible material. Clean residue from spill site. Dispose in accordance with applicable regulations (see Section 13).

OTHER INFORMATION

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation. Keep away from sources of ignition - no smoking. Pressurized container; protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Take precautionary measures against static discharges. Do not spray on a naked flame or incandescent material. Use spark-proof tools.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Avoid release to the environment.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/mist. Use personal protective equipment. Refer to instructions on label and regulations for safety and health at work. Avoid exposure - obtain special instructions before using.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep in cool and well ventilated area. Protect from open fire, heat and direct sunlight. Keep in well closed containers. Keep away from sources of ignition. Keep away from oxidising substances. Keep away from food, drink and animal feeding stuffs.

Packaging materials

The original container of producer.

Requirements for storage rooms and vessels

Do not store in unlabelled containers.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

Name	mg/m ³	ml/m ³	Short-term value mg/m ³	Short-term value ml/m ³	Remark	Biological Tolerance Values
Xylene, o-,m-,p- or mixed isomers (1330-20-7)	220	50	441	100	Sk, BMGV	650 mmol methyl hippuric acid/mol creatinine in urine - Post shift 650 mmol methyl hippuric acid/mol creatinine in urine - Post shift 650 mmol methyl hippuric acid/mol creatinine in urine - Post shift
Acetone (67-64-1)	1210	500	3620	1500	/	/

Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	value
zinc powder - zinc dust (stabilized)	Worker	dermal	long term systemic effects	/	83.3 mg/kg/day
zinc powder - zinc dust (stabilized)	Worker	inhalation	long term systemic effects	/	5 mg/m ³
zinc powder - zinc dust (stabilized)	Consumer	oral	long term systemic effects	/	83 mg/kg/day
zinc powder - zinc dust (stabilized)	Consumer	inhalation	long term systemic effects	/	2.5 mg/m ³
zinc powder - zinc dust (stabilized)	Consumer	dermal	long term systemic effects	/	83 mg/kg/day
acetone	Worker	inhalation	short term systemic effects	/	1210 mg/m ³
acetone	Worker	dermal	long term systemic effects	/	186 mg/kg bw/day
acetone	Consumer	oral	long term systemic effects	/	62 mg/kg bw/day
acetone	Consumer	inhalation	long term systemic effects	/	200 mg/m ³
acetone	Consumer	inhalation	short term local effects	/	2420 mg/m ³
acetone	Consumer	dermal	long term systemic effects	/	62 mg/kg bw/day
hydrocarbons C9 aromatics	Worker	dermal	long term systemic effects	/	25 mg/kg
hydrocarbons C9 aromatics	Worker	inhalation	long term systemic effects	/	150 mg/m ³
hydrocarbons C9 aromatics	Consumer	oral	long term systemic effects	/	11 mg/kg
hydrocarbons C9 aromatics	Consumer	dermal	long term systemic effects	/	11 mg/kg
hydrocarbons C9 aromatics	Consumer	inhalation	long term systemic effects	/	32 mg/m ³

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	value
zinc powder - zinc dust (stabilized)	fresh water	/	20.6 µg/l
zinc powder - zinc dust (stabilized)	marine water	/	6.1 µg/L
zinc powder - zinc dust (stabilized)	fresh water sediment	dry weight	117.8 mg/kg
zinc powder - zinc dust (stabilized)	marine water sediment	dry weight	56.5 mg/kg
zinc powder - zinc dust (stabilized)	soil	dry weight	35.6 mg/kg
zinc powder - zinc dust (stabilized)	water treatment plant	/	100 µg/L
acetone	marine water	/	1.06 mg/L
acetone	fresh water	/	10.6 mg/L
acetone	fresh water sediment	dry weight	30.4 mg/kg
acetone	marine water sediment	dry weight	3.04 mg/kg
acetone	water, intermittent release	fresh water	21 mg/L
acetone	water treatment plant	/	100 mg/L
acetone	soil	dry weight	29.5 mg/kg

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not breathe vapours/aerosols. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Keep away from foodstuffs, beverages and feed. Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Keep eyewash bottles or personal eyewash units and emergency showers available. If this product contains ingredients with exposure limits, personal, workplace atmosphere monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protection.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration.

Personal protective equipment

Eye and face protection

Tight fitting protective goggles (EN 166).

Hand protection

In case of prolonged exposure, wear protective gloves (EN 374). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. The penetration time is determined by the protective glove manufacturer and must be observed.

Appropriate materials

Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345). Protective antistatic clothing EN 1149 (1:2006, 2:1998 and 3:2004, 5:2008), protective antistatic shoes (EN 20345:2012). Choose body protection according to the activity and possible exposure.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. At elevated concentrations of vapours/aerosols in the air wear a mask (EN 140) with filter A2-P2 (EN 14387). For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard EN 137, EN 138.

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

Prevent exposure in the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state

liquid - aerosol

Colour

gray

Odour characteristic

Important health, safety and environmental information

Odour threshold	No information.
pH	substance/mixture is non-polar/aprotic
Melting point/Freezing point	No information.
Initial boiling point/boiling range	No information.
Flash point	No information.
Evaporation rate	No information.
Flammability (solid, gas)	No information.
Explosion limits (vol%)	2.1 – 13 vol % (acetone) 1.5 – 10.9 vol % (propellant)
Vapour pressure	3 hPa at 20 °C
Vapour density	No information.
Density / weight	Density: 1.744 kg/L at 20 °C (data refers to the liquid portion of the product)
Solubility	No information.
Partition coefficient	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
Viscosity	No information.
Explosive properties	No information.
Oxidising properties	No information.

9.2 OTHER INFORMATION

Weight organic solvents	66 % 840 g/l (VOC) 840 g/l (VOC (RFU))
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions. Vapours and air can form flammable or explosive mixtures.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not expose to heat and direct sunlight. Do not store above 50°C.

10.5 Incompatible materials

Strong reducing agents.

Oxidants. Halogenated compounds. Alkali metal. Ethanolamine. Hydrogen peroxide. Attacks many plastics and rubbers.

Peroxide.

10.6 Hazardous decomposition products

In case of fire/explosion vapours/gases that pose a health hazard are released.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
acetone	oral	LD ₅₀	rat	/	5800 mg/kg	/	/
acetone	dermal	LD ₅₀	rabbit	/	> 15800 mg/kg	/	/
acetone	inhalation	LC ₅₀	rat	/	76 mg/l	/	/
hydrocarbons C9 aromatics	oral	LD ₅₀	rat	/	> 2000 mg/kg	/	/
hydrocarbons C9 aromatics	dermal	LD ₅₀	rabbit	/	> 2000 mg/kg	/	/
xylene	oral	LD ₅₀	rat	/	2000 - 5000 mg/kg	/	/
xylene	inhalation	LC ₅₀	rat	4 h	10 - 20 mg/l	/	/
2-butanone oxime	oral	ATE	/	/	100 mg/kg bw	/	/
2-butanone oxime	dermal	ATE	/	/	1100 mg/kg bw	/	/
2-butanone oxime	inhalation	LC ₅₀	rat	4 h	20 mg/l	/	/

Additional information

The product is not classified for acute toxicity.

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
acetone	guinea pig	/	Non-irritant.	/	/

Additional information

Causes skin irritation.

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
acetone	/	rabbit	/	Irritating to eyes.	OECD 405	/
acetone	/	rabbit	/	Irritates the eyes. The occurrence of corneal injuries is possible.	OECD 405	/
hydrocarbons C9 aromatics	/	/	/	May cause irritation.	/	/

Additional information

Causes serious eye irritation.

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	result	Method	Remark
acetone	/	guinea pig	/	Non sensitising.	OECD 406	/

Additional information

It contains at least one ingredient that can cause sensitisation. Can cause allergic reaction.

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	result	Method	Remark
acetone	/	Bacteria	/	The tests did not show mutagenic effects	/	/
acetone	/	Cell: Mammalian-Animal	/	The tests did not show mutagenic effects	/	/
acetone	in-vitro mutagenicity	/	/	Negative.	OECD 473	Chromosome aberration assay
acetone	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative.	OECD 476	/
acetone	in-vitro mutagenicity	Bacteria	/	Negative.	OECD 471	/
acetone	in-vivo mutagenicity	mouse	/	Negative.	The micronucleus test	/
hydrocarbons C9 aromatics	/	/	/	Negative.	/	/
xylene	/	/	/	Not mutagenic.	/	/

(f) Carcinogenicity

For components

Name	Exposure route	Type	Species	Time	value	result	Method	Remark
acetone	/	/	/	/	/	Animal testing did not show any carcinogenic effects.	/	/
acetone	dermal	/	mouse	/	/	negative	/	/
hydrocarbons C9 aromatics	/	/	/	/	/	Not carcinogenic.	/	/

(g) Reproductive toxicity

For components

Name	Reproductive toxicity type	Type	Species	Time	value	result	Method	Remark
acetone	Reproductive toxicity	/	/	/	/	Animal testing did not show any effects on fertility.	/	/
acetone	Teratogenicity	/	rat	/	/	Negative.	OECD 414	/
xylene	/	/	/	/	/	Not toxic for reproduction.	/	/
xylene	/	/	/	/	/	not teratogenic	/	/

Summary of evaluation of the CMR properties

May cause cancer.

(h) STOT-single exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
acetone	/	/	/	/	/	/	/	May cause drowsiness or dizziness.	/	/
hydrocarbons C9 aromatics	inhalation	/	/	/	/	/	/	May cause respiratory irritation.	/	/

Additional information

May cause drowsiness or dizziness. May cause respiratory irritation.

(i) STOT-repeated exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
acetone	dermal	-	/	/	/	/	/	Repeated exposure may cause dry and cracked skin.	/	/
acetone	oral	NOAEL	rat	90 days	/	/	900 mg/kg bw/day	/	/	/
acetone	inhalation	NOAEC	rat	/	/	/	22500 mg/m ³	/	/	/
acetone	inhalation	/	human	/	/	/	/	Headache, dizziness, fatigue, nausea and vomiting.	/	excessive exposure to vapors
acetone	dermal	/	human	/	/	/	/	Repeated or prolonged exposure may cause dermatitis.	/	/
acetone	inhalation	-	human	/	chronic	Nasal inner lining	/	Symptoms: inflammation of the mucous membranes.	/	/

Additional information

May cause damage to organs through prolonged or repeated exposure.

(j) Aspiration hazard

No information.

Additional information

May be fatal if swallowed and enters airways.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Acute (short-term) toxicity****For components**

Name	Type	value	Exposure time	Species	organism	Method	Remark
acetone	LC ₅₀	5540 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/
acetone	LC ₅₀	11000 mg/L	96	fish	<i>Alburnus alburnus</i>	/	/
acetone	NOEC	430 mg/L	96 h	algae	/	/	/
acetone	/	1000 mg/L	30 min	bacteria	Activated sludge	OECD 209	/
hydrocarbons C9 aromatics	LC ₅₀	9.22 mg/L	96 h	fish	/	/	/
hydrocarbons C9 aromatics	NOELR	1 mg/L	72 h	algae	<i>Pseudokirchneriella subcapitata</i>	/	/
xylene	EC ₅₀	1 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
xylene	LC ₅₀	16.9 - 34.7 mg/L	96 h	fish	/	/	/
reaction mass of ethylbenzene and m-xylene and p-xylene	LC ₁₀	> 1.3 mg/L	/	fish	/	/	/

Chronic (long-term) toxicity**For components**

Name	Type	value	Exposure time	Species	organism	Method	Remark
acetone	NOEC	2212 mg/l	28 days	crustacea	<i>Daphnia pulex</i>	/	/

xylene	NOEC	> 1.3 mg/l	56 days	fish	/	/	/
xylene	NOEC	0.96 mg/l	7 days	crustacea	<i>Daphnia magna</i>	/	/

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

For components

Name	Environment	Type / Method	Half Time	Evaluation	Method	Remark
acetone	water	/	/	Degraded by hydrolysis.	/	/

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark
acetone	biodegradability	91	28 days	rapidly biodegradable	OECD 301B	/
acetone	BOD	1900 mg/g	5 days	/	/	/
acetone	COD	2100 mg/g	/	/	/	/
hydrocarbons C9 aromatics	/	78 %	28 days	readily biodegradable	/	/
xylene	-	/	/	readily biodegradable	/	/

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
acetone	Octanol-water (log Pow)	-0.24	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	value	Duration	Evaluation	Method	Remark
acetone	BCF	/	< 10	/	/	/	/
xylene	BCF	/	25.9	/	Low bioaccumulation potential.	/	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Other adverse effects

No information.

12.7 Additional information

For product

Toxic to aquatic organisms: may cause long-term adverse effects in the aquatic environment. Water hazard class (WGK): 3 (Self-assessment), very hazardous for water. Do not allow to reach ground water, water courses or sewage system.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Do not allow product to reach drains/sewage systems. Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Product and container must be disposed of safely.

Waste codes / waste designations according to LoW

16 05 04* - gases in pressure containers (including halons) containing dangerous substances

Packaging

Uncleaned containers should not be perforated, cut or welded. Dispose of in accordance with applicable waste disposal regulation. Pressurized container. Do not pierce or burn, even after use. Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

15 01 11* - metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

Waste treatment-relevant information

No information.

Sewage disposal-relevant information









No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2 UN proper shipping name			
AEROSOLS	AEROSOLS (zinc powder - zinc dust (stabilized))	AEROSOLS	AEROSOLS
14.3 Transport hazard class(es)			
2	2	2	2

 	 	 	 
14.4 Packing group			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.5 Environmental hazards			
YES	Marine pollutant	YES	YES
14.6 Special precautions for user			
Limited quantities 1 L Special provisions 190, 327, 344, 625 Packing Instructions P207, LP200 Special packing provisions PP87, RR6, L2 Transport category 2 Tunnel restriction code (D)	Limited quantities 1 L EmS F-D, S-U	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y203 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 30 kg G Packing Instructions (Pkg Inst) 203 Maximum Net Quantity/Package (Max Net Qty/Pkg) 25 kg Special provisions A145, A167, A802	Limited quantities 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code			
Goods may not be carried in bulk in bulk containers, containers or vehicles.	Goods may not be carried in bulk in bulk containers, containers or vehicles.	Not given/not applicable	Not given/not applicable

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)
not applicable

Regulation EC 648/2004 on detergents
No information.

Special instructions

Observe the regulations on employment and protection against dangerous substances for young people, pregnant

women and nursing mothers.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

2.1 Classification of the substance or mixture 2.2 Label elements 3.2 Mixtures 7.1 Precautions for safe handling 8.1 Control parameters 11.1 Information on toxicological effects 12.1 Toxicity 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
 ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 CEN - European Committee for Standardisation
 C&L - Classification and Labelling
 CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
 CAS# - Chemical Abstracts Service number
 CMR - Carcinogen, Mutagen, or Reproductive Toxicant
 CSA - Chemical Safety Assessment
 CSR - Chemical Safety Report
 DMEL - Derived Minimal Effect Level
 DNEL - Derived No Effect Level
 DPD - Dangerous Preparations Directive 1999/45/EC
 DSD - Dangerous Substances Directive 67/548/EEC
 DU - Downstream User
 EC - European Community
 ECHA - European Chemicals Agency
 EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
 EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
 EEC - European Economic Community
 EINECS - European Inventory of Existing Commercial Substances
 ELINCS - European List of notified Chemical Substances
 EN - European Standard
 EQS - Environmental Quality Standard
 EU - European Union
 Euphrac - European Phrase Catalogue
 EWC - European Waste Catalogue (replaced by LoW – see below)
 GES - Generic Exposure Scenario
 GHS - Globally Harmonized System
 IATA - International Air Transport Association
 ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
 IMDG - International Maritime Dangerous Goods
 IMSBC - International Maritime Solid Bulk Cargoes
 IT - Information Technology
 IUCLID - International Uniform Chemical Information Database
 IUPAC - International Union for Pure Applied Chemistry
 JRC - Joint Research Centre
 Kow - octanol-water partition coefficient
 LC50 - Lethal Concentration to 50 % of a test population
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
 LE - Legal Entity
 LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
 LR - Lead Registrant
 M/I - Manufacturer / Importer
 MS - Member States

MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H370 Causes damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.