

SAFETY DATA SHEET according to regulation 1907/2006

silco®**Product name: 4110-0,4****Creation date: 01.03.2011, Revision: 29.06.2022, version: 2.0**

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

1.1 Product identifier

Product name

4110-0,4

UFI:

AF00-40XP-U00H-51QF

<https://my.chemius.net/p/H3QwTz/en/pd/en>

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

Relevant identified uses

Etch primer

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.

Eye Irrit. 2; H319 Causes serious eye irritation.

STOT SE 3; H336 May cause drowsiness or dizziness.

Aquatic Chronic 3; H412 Harmful 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.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/eye protection/face protection.

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/doctor if you feel unwell.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

P501 Dispose of contents/container in accordance with national regulation.

Contains:

acetone

n-butyl acetate

Special provisions

Vapours and air can at inadequate ventilation form an explosive mixture.

2.3 Other hazards

No information.

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
acetone	67-64-1 200-662-2 606-001-00-8	25-<50	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	/	/
n-butyl acetate	123-86-4 204-658-1 607-025-00-1	10-<20	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066	/	/
butane	106-97-8 203-448-7 601-004-00-0	10-<20	Flam. Gas 1; H220 Press. Gas; H280	/	C

propane	74-98-6 200-827-9 601-003-00-5	10-<20	Flam. Gas 1; H220 Press. Gas; H280	/	/
isobutane	75-28-5 200-857-2 601-004-01-8	5-<10	Flam. Gas 1; H220 Press. Gas; H280	/	C, S
titanium dioxide	13463-67-7 236-675-5 022-006-00-2	5-<10	Carc. 2; H351	/	10, V, W
xylene	1330-20-7 215-535-7 601-022-00-9	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	/	C
trizinc bis(orthophosphate)	7779-90-0 231-944-3 030-011-00-6	1-<2,5	Aquatic Acute 1; H400; M = 1 Aquatic Chronic 1; H410; M = 1	/	/
zinc oxide	1314-13-2 215-222-5 030-013-00-7	0,1-<1	Aquatic Acute 1; H400; M = 1 Aquatic Chronic 1; H410; M = 1	/	/

Notes for substances

10	The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.
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).
V	If the substance is to be placed on the market as fibres (with diameter $< 3 > 5 \mu\text{m}$ and aspect ratio $\geq 3:1$) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.
W	It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

SECTION 4: FIRST AID MEASURES

4.1 First aid measures

General notes

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 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. If victim is not breathing give artificial respiration. If symptoms develop and persist, seek medical attention.

Following skin contact

Take off all contaminated clothing. Wash affected skin areas thoroughly with plenty of water and soap. If symptoms develop and persist, seek medical attention.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. Consult a physician immediately!

Following ingestion

Consult a physician. Show the physician the safety data sheet or label. Rinse mouth thoroughly with water. Do not induce vomiting without prior consultation with a doctor. If vomiting occurs, the patient should hold the head lower than the hips, because it reduces the possibility of aspiration.

4.2 Most important symptoms and effects, both acute and delayed**Following inhalation**

Vapours may cause drowsiness and dizziness. Intoxication, vertigo, headache, nausea. Coughing, sneezing, nasal discharge, labored breathing.

Following skin contact

Prolonged and repeated exposure may cause redness, itching and cracking of the skin in sensitive people.

Following eye contact

Redness, tearing, pain.

Following ingestion

May cause nausea/vomiting and diarrhea. May cause abdominal discomfort.

4.3 Indication of any immediate medical attention and special treatment needed

No information.

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Foam.
Fire extinguishing powder.
Carbon dioxide (CO₂).

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.

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. Cool containers at risk with water spray. If possible remove containers from endangered area. Vapours can form explosive mixtures with air.

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

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

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

For containment

No information.

For cleaning up

Make sure the leakage site is well aired. Collect the spray cans and hand them over to an authorized waste disposal contractor. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor.

OTHER INFORMATION

See Section 7: safe handling.

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. Use spark-proof tools. Take precautionary measures against static discharges. Pressurized container; protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray onto open flame or glowing body.

Measures to prevent aerosol and dust generation

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

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

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 and eyes. Do not breathe vapours/mist. Remove contaminated clothes and wash them before reuse. Refer to instructions on label and regulations for safety and health at work.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Store in accordance with local regulations. Keep in cool and well ventilated area. Protect from open fire, heat and direct sunlight. Keep away from food, drink and animal feeding stuffs.

Packaging materials

No information.

Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking.

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
Butane (106-97-8)	1450	600	1810	750	Carc, (only applies if Butane contains more than 0.1% of buta-1,3-diene)	/
Acetone (67-64-1)	1210	500	3620	1500	/	/
Butyl acetate (123-86-4)	724	150	966	200	/	/
Titanium dioxide respirable (13463-67-7)	4	/	/	/	/	/
Titanium dioxide total inhalable (13463-67-7)	10	/	/	/	/	/

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

No information.

PNEC values

For product

No information.

For components

No information.

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 eat, drink or smoke while working. Do not breathe vapours/aerosols. Avoid contact with eyes and skin.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse.

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

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.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Butyl rubber	0.7 mm	60 min	/

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 mask with filter AX (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

Do not allow product to reach drains, sewage systems or ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state

liquid

Colour

according to specification gray

Odour

like acetone

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	< 0 °C
Flash point	< 0 °C
Evaporation rate	No information.
Flammability (solid, gas)	> 200 °C
Explosion limits (vol%)	No information.
Vapour pressure	No information.
Vapour density	No information.
Density / weight	Density: 0.78657 g/cm ³ at 20 °C
Solubility	Water: Insoluble
Partition coefficient	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
Viscosity	No information.
Explosive properties	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
Oxidising properties	No information.

9.2 OTHER INFORMATION

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

10.1 Reactivity

No data available.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Vapours and air can form flammable or explosive mixtures.

10.4 Conditions to avoid

Protect from heat, direct sunlight, open fire, sparks. Do not store above 50°C.

10.5 Incompatible materials

Strong acids. Strong oxidising agents.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. 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 product

Exposure route	Type	Species	Time	value	Method	Remark
oral	ATE	/	/	11611 mg/kg	/	/
inhalation	ATE	/	4 h	> 50.1 mg/l	/	/

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
acetone	oral	LD ₅₀	rat	/	5800 mg/kg	/	/
acetone	dermal	LD ₅₀	rabbit	/	20000 mg/kg	/	/
acetone	inhalation	LC ₅₀	rat	4 h	76 mg/l	/	/
n-butyl acetate	oral	LD ₅₀	rat	/	13100 mg/kg	/	/
n-butyl acetate	dermal	LD ₅₀	rabbit	/	> 5000 mg/kg	/	/
n-butyl acetate	inhalation	LC ₅₀	rat	4 h	> 21 mg/l	/	/
butane	inhalation	LC ₅₀	rat	4 h	658 mg/l	/	Literature study
propane	inhalation	LC ₅₀	rat	4 h	> 20 mg/l	/	Literature study
isobutane	inhalation	LC ₅₀	rat	4 h	658 mg/l	/	Literature study
titanium dioxide	oral	LD ₅₀	rat	/	> 20000 mg/kg	/	/
titanium dioxide	dermal	LD ₅₀	rabbit	/	> 10000 mg/kg	/	/
titanium dioxide	inhalation	LC ₅₀	rat	4 h	> 6.82 mg/l	/	/
xylene	oral	LD ₅₀	rat	/	3523 mg/kg	/	/
xylene	dermal	LD ₅₀	/	/	1100 mg/kg	/	/
xylene	inhalation	LC ₅₀	/	4 h	11 mg/l	/	/
trizinc bis(orthophosphate)	oral	LD ₅₀	rat	/	> 5000 mg/kg	/	/
trizinc bis(orthophosphate)	inhalation	LC ₅₀	rat	4 h	> 5.7 mg/l	/	/
zinc oxide	oral	LD ₅₀	rat	/	> 5000 mg/kg	/	/
zinc oxide	dermal	LD ₅₀	rat	/	> 2000 mg/kg	/	/
zinc oxide	inhalation	LC ₅₀	rat	4 h	5.7 mg/l	/	/

(b) Skin corrosion/irritation

No information.

Additional information

The product is not classified as irritating to the skin.

(c) Serious eye damage/irritation

No information.

Additional information

Causes serious eye irritation.

(d) Respiratory or skin sensitisation

No information.

Additional information

The product is not classified as sensitising.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

No information.

Additional information

May cause drowsiness or dizziness.

(i) STOT-repeated exposure

No information.

Additional information

Repeated exposure may cause skin dryness or cracking.

(j) Aspiration hazard

No information.

Additional information

Aspiration hazard: Not classified.

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

No information.

Chronic (long-term) toxicity

No information.

12.2 Persistence and degradability**Abiotic degradation, physical- and photo-chemical elimination**

No information.

Biodegradation

No information.

12.3 Bioaccumulative potential**Partition coefficient**

No information.

Bioconcentration factor (BCF)

No information.

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**

Harmful to aquatic life with long lasting effects. Do not allow to reach ground water, water courses or sewage system. Water hazard class 2 (self-assessment): hazardous for water. Danger for drinking water if even small quantities leak into ground water.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product / Packaging disposal****Waste chemical**

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Do not allow product to reach drains/sewage systems. Do not dispose together with household garbage.

Waste codes / waste designations according to LoW

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

Packaging

Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

15 01 04 - metallic packaging

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	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			
NO	NO	NO	NO
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 Flash point 0 °C	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)
EU limit values and category: B(e) 840 g/l. VOC Content: 641 g/l

Regulation EC 648/2004 on detergents
No information.

Special instructions
Seveso III, P3a: flammable aerosols.

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

8.1 Control parameters 9.1 Information on basic physical and chemical properties 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.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
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.