



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 4/10/2022 Revision date: 4/10/2022 Supersedes version of: 7/10/2020

Version: 5.0

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

1.1. Product identifier

Product form Product name UFI Product code Mixture CFS-PRIM 10J1-VR0S-EFNW-P35S BU Fire Protection



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

1.2.1. Relevant identified uses

Main use category Industrial/Professional use spec Function or use category

For professional use only Adhesion promoter

Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SupplierDepartment issuing data specification sheetHilti (Hong Kong) Ltd.Hilti AG701-704, 7/F, Tower A, Manulife Financial Centre 223 Wai Yip Street,Feldkircherstraße 100Kwun TongFL- 9494 SchaanHK- KowloonLiechtensteinHong KongT +423 234 2111T +852 27734 700chemicals.hse@hilti.comhksales@hilti.comKell

1.4. Emergency telephone number

Emergency number

Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +852 27734 700

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]	
Flammable liquids, Category 2	H225
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2 Full text of H- and EUH-statements: see section 16	H373



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Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause damage to organs through prolonged or repeated exposure. May cause drowsiness or dizziness. Harmful if inhaled. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/200)8 [CLP]		
Hazard pictograms (CLP)			
	GHS02 GHS05 GHS07 GHS08		
Signal word (CLP)	Danger		
Contains	Xylene, 2-Butanone, Ethylbenzene, 1-Butanol		
Hazard statements (CLP)	H225 - Highly flammable liquid and vapour.		
	H315 - Causes skin irritation.		
	H318 - Causes serious eye damage.		
	H332 - Harmful if inhaled.		
H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness.			
Precautionary statements (CLP)	P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.		
P280 - Wear eye protection, protective clothing, protective gloves.			
	P302+P352 - IF ON SKIN: Wash with plenty of soap and water.		
	P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position		
comfortable for breathing.			
	P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes.		
Remove contact lenses, if present and easy to do. Continue rinsing. Immedia			
	doctor.		
	P308+P313 - IF exposed or concerned: Get medical advice/attention.		

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Xylene (1330-20-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
2-Butanone (78-93-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Ethylbenzene (100-41-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1-Butanol (71-36-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
toluene (108-88-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %



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Component	
Xylene(1330-20-7)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
2-Butanone(78-93-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Ethylbenzene(100-41-4)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
1-Butanol(71-36-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
toluene(108-88-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Xylene substance with a Community workplace exposure limit	CAS-No.: 1330-20-7 EC-No.: 215-535-7 EC Index-No.: 601-022-00-9 REACH-no: 01-2119488216- 32	25 – 60	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
2-Butanone substance with a Community workplace exposure limit	CAS-No.: 78-93-3 EC-No.: 201-159-0 EC Index-No.: 606-002-00-3 REACH-no: 01-2119457290- 43	10 – 25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Ethylbenzene substance with a Community workplace exposure limit	CAS-No.: 100-41-4 EC-No.: 202-849-4 EC Index-No.: 601-023-00-4 REACH-no: 01-2119489370- 35	10 – 25	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412



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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-Butanol	CAS-No.: 71-36-3 EC-No.: 200-751-6 EC Index-No.: 603-004-00-6 REACH-no: 01-2119484630- 38	2.5 – 5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335
toluene substance with a Community workplace exposure limit	CAS-No.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3 REACH-no: 01-2119471310- 51	0.1 – 1	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures 4.1. Description of first aid measures First-aid measures general Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). First-aid measures after inhalation Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin First-aid measures after skin contact irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. First-aid measures after eye contact Call a physician immediately. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. First-aid measures after ingestion Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. 4.2. Most important symptoms and effects, both acute and delayed Symptoms/effects May cause drowsiness or dizziness. May cause respiratory irritation. Danger of serious damage to health by prolonged exposure Symptoms/effects after inhalation through inhalation. May cause drowsiness or dizziness.

Causes skin irritation.

Causes serious eye damage.

Symptoms/effects after skin contact Symptoms/effects after eye contact

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	Foam. Dry powder. Carbon dioxide. Water spray. Sand.		
Unsuitable extinguishing media	Do not use a heavy water stream.		
5.2. Special hazards arising from the substance or mixture			
Fire hazard	Highly flammable liquid and vapour.		
Explosion hazard	May form flammable/explosive vapour-air mixture.		
5.3. Advice for firefighters			
Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.		



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Protection during firefighting Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release meas	ures
6.1. Personal precautions, protective equipme	ent and emergency procedures
General measures	Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
6.1.1. For non-emergency personnel	
Emergency procedures	Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours. Avoid contact with skin and eyes. Evacuate unnecessary personnel.
6.1.2. For emergency responders	
Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapours/spray.
Emergency procedures	Ventilate area.
6.2. Environmental precautions	
Prevent entry to sewers and public waters. Notify author	prities if liquid enters sewers or public waters.

 6.3. Methods and material for containment and cleaning up

 Methods for cleaning up
 Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

 Other information
 Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	
Additional hazards when processed Precautions for safe handling Hygiene measures	Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe vapours. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well- ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling.
7.2. Conditions for safe storage, inclu	uding any incompatibilities
Technical measures	Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions	Store in a well-ventilated place. Keep cool. Store locked up. Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place. Keep container tightly closed.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition, Direct sunlight, Heat sources,



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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Xylene (1330-20-7)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Xylene, mixed isomers, pure	
IOEL TWA	221 mg/m ³	
IOEL TWA [ppm]	50 ppm	
IOEL STEL	442 mg/m ³	
IOEL STEL [ppm]	100 ppm	
Remark	Skin	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
2-Butanone (78-93-3)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Butanone	
IOEL TWA	600 mg/m³	
IOEL TWA [ppm]	200 ppm	
IOEL STEL	900 mg/m³	
IOEL STEL [ppm]	300 ppm	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
Ethylbenzene (100-41-4)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Ethylbenzene	
IOEL TWA	442 mg/m ³	
IOEL TWA [ppm]	100 ppm	
IOEL STEL	884 mg/m ³	
IOEL STEL [ppm]	200 ppm	
Remark	Skin	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
toluene (108-88-3)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Toluene	
IOEL TWA	192 mg/m ³	
IOEL TWA [ppm]	50 ppm	
IOEL STEL	384 mg/m ³	



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toluene (108-88-3)		
IOEL STEL [ppm]	100 ppm	
Remark	Skin	
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Eye protection			
Туре	Field of application	Characteristics	Standard
Safety glasses			EN 166, EN 170

8.2.2.2. Skin protection

Hand protection:

Wear protective gloves.

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
	Viton® II		>0,7		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended



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Respiratory protection			
Device	Filter type	Condition	Standard
	ABEK		

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not applicable
Freezing point	-50 °C
Boiling point	110 °C
Flammability	Not applicable
Explosive properties	Product is not explosive.
Explosive limits	Not available
Lower explosion limit	1.7 vol %
Upper explosion limit	11.5 vol %
Flash point	7 °C
Auto-ignition temperature	505 °C
Decomposition temperature	Not available
pH	Not available
Viscosity, kinematic	319.149 mm²/s
Viscosity, dynamic	300 mPa.s
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available
Vapour pressure at 50 °C	Not available
Density	0.94 g/cm ³
Relative density	Not available
Relative vapour density at 20 °C	Not available
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available



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SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (oral)	Not classified	
Acute toxicity (dermal)	Not classified	
Acute toxicity (inhalation)	Harmful if inhaled.	
CFS-PRIM		
ATE CLP (dust,mist)	2 mg/l/4h	
Xylene (1330-20-7)		
LD50 oral rat	> 4000 mg/kg bodyweight (Equivalent or similar to EU Method B.1, Rat, Female, Experimental value, Oral, 14 day(s))	
LD50 dermal rabbit	> 4200 mg/kg bodyweight (4 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))	
LC50 Inhalation - Rat	29.09 mg/l (Equivalent or similar to EU Method B.2, 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))	
2-Butanone (78-93-3)		
LD50 oral rat	2193 mg/kg bodyweight (Equivalent or similar to OECD 423, Rat, Male / female, Experimental value, Oral, 14 day(s))	
LD50 dermal rabbit	> 8100 mg/kg bw/day (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))	
Ethylbenzene (100-41-4)		
LD50 oral rat	3500 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s))	
LD50 dermal rabbit	15433 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))	
LC50 Inhalation - Rat	17.8 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))	
1-Butanol (71-36-3)		
LD50 oral rat	2292 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))	



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1-Butanol (71-36-3)	
LD50 dermal rabbit	3430 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 17.76 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
toluene (108-88-3)	
LD50 oral rat	5580 mg/kg bodyweight (Equivalent or similar to EU Method B.1, Rat, Male, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	28.1 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	Not classified
Additional information	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Not classified Record on available data, the classification criteria are not mot
Carcinogenicity	
Additional information	Based on available data, the classification criteria are not met
Xylene (1330-20-7)	
IARC group	3 - Not classifiable
Ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
toluene (108-88-3)	
IARC group	3 - Not classifiable
Reproductive toxicity	Not classified
Additional information	Based on available data, the classification criteria are not met
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
Xylene (1330-20-7)	
STOT-single exposure	May cause respiratory irritation.
2-Butanone (78-93-3)	
STOT-single exposure	May cause drowsiness or dizziness.
1-Butanol (71-36-3)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Xylene (1330-20-7)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Ethylbenzene (100-41-4)	
STOT-repeated exposure	May cause damage to organs (hearing organs) through prolonged or repeated exposure (if inhaled).



symptoms

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toluene (108-88-3)		
STOT-repeated exposure	May cause damage to organs (central nervous system) through prolonged or repeated exposure (if inhaled).	
Aspiration hazard	Not classified	
Additional information	Based on available data, the classification criteria are not met	
CFS-PRIM		
Viscosity, kinematic	319.149 mm²/s	
11.2. Information on other hazards		
11.2.1. Endocrine disrupting properties		
11.2.2. Other information		
Potential adverse human health effects and	Harmful if inhaled.	

SECTION 12: Ecological information

12.1. Toxicity	
Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified
Xylene (1330-20-7)	
LC50 - Fish [1]	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Read-across, Lethal)
ErC50 algae	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
2-Butanone (78-93-3)	
LC50 - Fish [1]	2993 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	308 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	1972 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
Ethylbenzene (100-41-4)	
LC50 - Fish [1]	5.1 mg/l (ASTM, 96 h, Menidia menidia, Flow-through system, Salt water, Experimental value, Lethal)
LC50 - Fish [2]	4.2 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 - Crustacea [1]	1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 - Crustacea [2]	75 mg/l (48 h; Daphnia magna)
EC50 - Other aquatic organisms [1]	48 mg/l (72 h; Scenedesmus subspicatus)
EC50 72h - Algae [1]	5.4 mg/l (US EPA, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Cell numbers)



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Ethylbenzene (100-41-4)		
TLM - Fish [1]	29 ppm (96 h; Lepomis macrochirus; Hard water)	
TLM - Fish [2]	42.3 mg/l (96 h; Pimephales promelas)	
TLM - Other aquatic organisms [1]	10 - 100,96 h	
Threshold limit - Algae [1]	> 160 mg/l (192 h; Scenedesmus quadricauda; Toxicity test)	
Threshold limit - Algae [2]	33 mg/l (192 h; Microcystis aeruginosa; Toxicity test)	
1-Butanol (71-36-3)		
LC50 - Fish [1]	1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, GLP)	
EC50 - Crustacea [1]	1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)	
ErC50 algae	225 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)	
toluene (108-88-3)		
LC50 - Fish [1]	5.5 mg/l (96 h, Oncorhynchus kisutch, Flow-through system, Fresh water, Experimental value, Lethal)	

12.2. Persistence and degradability

CFS-PRIM			
Persistence and degradability	Not established.		
Xylene (1330-20-7)	Xylene (1330-20-7)		
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.		
2-Butanone (78-93-3)			
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.		
Biochemical oxygen demand (BOD)	2.03 g O ₂ /g substance		
Chemical oxygen demand (COD)	2.31 g O ₂ /g substance		
ThOD	2.44 g O ₂ /g substance		
Ethylbenzene (100-41-4)			
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.		
Biochemical oxygen demand (BOD)	1.44 g O ₂ /g substance		
Chemical oxygen demand (COD)	2.1 g O ₂ /g substance		
ThOD	3.17 g O ₂ /g substance		
BOD (% of ThOD)	(20 day(s)) 45.4		
1-Butanol (71-36-3)			
Persistence and degradability	Readily biodegradable in water.		
Biochemical oxygen demand (BOD)	1.1 – 1.92 g O ₂ /g substance		
Chemical oxygen demand (COD)	2.46 g O ₂ /g substance		
ThOD	2.59 g O ₂ /g substance		



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	2.15 g O ₂ /g substance
Chemical oxygen demand (COD)	2.52 g O ₂ /g substance
ThOD	3.13 g O ₂ /g substance
BOD (% of ThOD)	0.69
12.3. Bioaccumulative potential	
CFS-PRIM	
Bioaccumulative potential	Not established.
Xylene (1330-20-7)	
BCF - Fish [1]	7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read- across)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2-Butanone (78-93-3)	
Partition coefficient n-octanol/water (Log Pow)	0.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Ethylbenzene (100-41-4)	
BCF - Fish [1]	1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)
BCF - Fish [2]	15 – 79 (Carassius auratus)
BCF - Other aquatic organisms [1]	4.68 (Lamellibranchiata)
Partition coefficient n-octanol/water (Log Pow)	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1-Butanol (71-36-3)	
Partition coefficient n-octanol/water (Log Pow)	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
toluene (108-88-3)	
BCF - Fish [1]	90 (72 h, Leuciscus idus, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	2.73 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
12.4. Mobility in soil	
Xylene (1330-20-7)	

Surface tension	28.01 – 29.76 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)



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Xylene (1330-20-7)		
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.	
2-Butanone (78-93-3)		
Surface tension	No data available in the literature	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.654 – 1.281 (log Koc, SRC PCKOCWIN v2.0, Calculated value)	
Ecology - soil	Highly mobile in soil. Slightly harmful to plants.	
Ethylbenzene (100-41-4)		
Surface tension	71.2 mN/m (23 °C, 0.058 g/l, EU Method A.5: Surface tension)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.71 (log Koc, PCKOCWIN v1.66, QSAR)	
Ecology - soil	Low potential for adsorption in soil. Toxic to soil organisms.	
1-Butanol (71-36-3)		
Surface tension	69.9 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.54 (log Koc, SRC PCKOCWIN v2.0, Calculated value)	
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.	
toluene (108-88-3)		
Surface tension	27.73 mN/m (25 °C, 0.05 %)	
Ecology - soil	Low potential for adsorption in soil.	

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information

Avoid release to the environment.

SECTION 13: Disposal considerations 13.1. Waste treatment methods Waste treatment methods Dispose of contents/container in accordance with licensed collector's sorting instructions. Product/Packaging disposal recommendations Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Additional information Flammable vapours may accumulate in the container. Handle empty containers with care because residual vapours are flammable. Ecology - waste materials Avoid release to the environment. European List of Waste (LoW) code 08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances



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HP Code

HP3 - "Flammable:"

– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and \leq 75 °C;

- flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;

- flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;

– flammable gaseous waste: gaseous waste which is flammable in air at 20 $^\circ C$ and a standard pressure of 101.3 kPa;

- water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;

- other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

SECTION 14: Transport information

In accordance with ADR / IMDG / IAT				
ADR	IMDG	IATA	RID	
14.1. UN number or ID number				
UN 1993	UN 1993	UN 1993	UN 1993	
14.2. UN proper shipping name				
FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	Flammable liquid, n.o.s.	FLAMMABLE LIQUID, N.O.S.	
Transport document description				
UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II, (D/E) UN 1993 FLAMMABLE LIQU N.O.S., 3, II		UN 1993 Flammable liquid, n.o.s., 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II	
14.3. Transport hazard class(es)				
3	3	3	3	
14.4. Packing group				
II	II II		II	
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	
No supplementary information availa	able			

14.6. Special precautions for user

Overland transport	
Classification code (ADR)	F1
Special provisions (ADR)	274, 601, 640D
Limited quantities (ADR)	11
Packing instructions (ADR)	P001, IBC02, R001
Mixed packing provisions (ADR)	MP19
Transport category (ADR)	2



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Orange plates	33 1993
Tunnel restriction code (ADR)	D/E
Transport by sea	
Special provisions (IMDG)	274
Limited quantities (IMDG)	1 L
Packing instructions (IMDG)	P001
EmS-No. (Fire)	F-E
EmS-No. (Spillage)	S-E
Stowage category (IMDG)	В
MFAG-No	127;128
Air transport	
PCA packing instructions (IATA)	353
PCA max net quantity (IATA)	5L
CAO packing instructions (IATA)	364
Special provisions (IATA)	A3
Rail transport	
Special provisions (RID)	274, 601, 640D
Limited quantities (RID)	1L
Packing instructions (RID)	P001, IBC02, R001

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Methylethylketone	Butanone	78-93-3	2914 12 00	Category 3		Annex I
Toluene		108-88-3	2902 30 00	Category 3		Annex I

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
			Annex II 2020/878
2		Modified	
3		Modified	

Data sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. None.

Other information

Full text of H- and EUH-statements:		
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3	
Asp. Tox. 1	Aspiration hazard, Category 1	
EUH066	Repeated exposure may cause skin dryness or cracking.	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 2	Flammable liquids, Category 2	
Flam. Liq. 3	Flammable liquids, Category 3	



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:		
H225	Highly flammable liquid and vapour.	
H226	Flammable liquid and vapour.	
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H312	Harmful in contact with skin.	
H315	Causes skin irritation.	
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.	
H361d	Suspected of damaging the unborn child.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H412	Harmful to aquatic life with long lasting effects.	
Repr. 2	Reproductive toxicity, Category 2	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis	

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 2	H225	On basis of test data
Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H336	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method

SDS_EU_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.