

HUS4-MAX

Safety information for 2-Component-products

Issue date: 14/10/2021

Revision date: 14/10/2021

Version: 1.0

SECTION 1: Kit identification

1.1 Product identifier

Product name HUS4-MAX
Product code BU Anchor



1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti (Fastening Systems) Limited
Unit C4
North City Business Park, Finglas
11 Dublin - Irland
T +353 188 64101
1850-287 387 Call Save - F +353 183 03569
iesales@hilti.com

SECTION 2: General information

Storage Storage temperature : -20 - 25 °C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

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

Org. Perox. F H242
Eye Irrit. 2 H319
Skin Sens. 1 H317
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of H-statements: see section 16

Label elements

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

Hazard pictograms (CLP)



GHS02



GHS07



GHS09

Signal word (CLP)

Warning

Hazardous ingredients

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (A); 2-Propenoic acid, 2-methyl-,

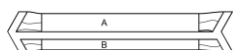
HUS4-MAX

Kit SIS (Safety Information Sheet)

Hazard statements (CLP)	1,4-butanediyl ester (A); 4-tert-butylpyrocatechol (A); dibenzoyl peroxide (B) H242 - Heating may cause a fire. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	P210 - Keep away from heat, hot surfaces, open flames, sparks. — No smoking. P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P337+P313 - If eye irritation persists: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
Extra phrases	

Additional information

Foil capsule contains:
Component A: Urethane methacrylate resin
Component B: Dibenzoyl peroxide, phlegmatized



Name	General description	Quantity	Unit	Classification according to Regulation (EC) No. 1272/2008 [CLP]
HUS4-MAX, A		1	pcs (pieces)	Skin Sens. 1, H317
HUS4-MAX, B		1	pcs (pieces)	Org. Perox. F, H242 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

SECTION 4: General information

General advice For professional users only

SECTION 5: Safe handling advice

General measures	Spilled material may present a slipping hazard
Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters
Storage conditions	Keep container tightly closed. Keep cool. Protect from sunlight. Avoid contact with : Air Expiry date: See date printed on box and capsule. Do not use if expiry date has been exceeded! Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Avoid breathing dust, vapours. 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 Prevent the build-up of electrostatic charge Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Methods for cleaning up	Stop leak without risks if possible Use non-sparking tools Absorb and/or contain spill with inert material, then place in suitable container.

HUS4-MAX

Kit SIS (Safety Information Sheet)

For containment	This material and its container must be disposed of in a safe way, and as per local legislation
Incompatible materials	Collect spillage. Strong acids Strong bases Activator reducing agents solid salts and solutions containing heavy metals

SECTION 6: First aid measures

First-aid measures after eye contact	Rinse immediately with plenty of water Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists
First-aid measures after ingestion	Rinse mouth Get medical advice/attention. Do not induce vomiting Obtain emergency medical attention
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air Allow the victim to rest
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures general	Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects after eye contact	May cause severe irritation
Symptoms/effects after skin contact	May cause an allergic skin reaction.

SECTION 7: Fire fighting measures

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
Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HUS4-MAX, B

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
 Issue date: 14/10/2021 Revision date: 14/10/2021 Version: 1.0

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

1.1. Product identifier

Product form	Mixture
Trade name	HUS4-MAX, B
Product code	BU Anchor

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

1.2.1. Relevant identified uses

Industrial/Professional use spec	For professional use only
Use of the substance/mixture	Adhesive anchor capsule for anchor fastening in concrete

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier	Department issuing data specification sheet
Hilti (Fastening Systems) Limited	Hilti Entwicklungsgesellschaft mbH
Unit C4	Hiltistraße 6
North City Business Park, Finglas	86916 Kaufering - Deutschland
11 Dublin - Irland	T +49 8191 906876
T +353 188 64101	anchor.hse@hilti.com
1850-287 387 Call Save - F +353 183 03569	
iesales@hilti.com	

1.4. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service
	+41 44 251 51 51 (international)
	+353 188 64101
	1850-287 387 Call Save

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Organic Peroxides, Type F	H242
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410
Full text of H-statements: see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

HUS4-MAX, B

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

GHS09

Signal word (CLP)

Warning

Contains

dibenzoyl peroxide

Hazard statements (CLP)

H242 - Heating may cause a fire.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

P210 - Keep away from heat, hot surfaces, open flames, sparks. — No smoking.

P280 - Wear eye protection, protective clothing, protective gloves.

P262 - Do not get in eyes, on skin, or on clothing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

UFI

YW48-4KGK-N817-G7FX

2.3. Other hazards

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

Component	
dibenzoyl peroxide (94-36-0)	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

Component	
dibenzoyl peroxide(94-36-0)	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]
dibenzoyl peroxide	CAS-No. 94-36-0 EC-No. 202-327-6 EC Index-No. 617-008-00-0 REACH-no 01-2119511472-50	10 – 25	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

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

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 4 First aid measures

4.1. Description of first aid measures

First-aid measures general	Take off immediately all contaminated clothing. 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. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye irritation.

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	Water spray. Carbon dioxide. Dry powder. Alcohol-resistant foam.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	May form flammable vapour-air mixtures. May decompose violently at elevated temperatures or in a fire. Burns vigorously. Insoluble in water. Contact with alkalis or acids may cause dangerous decomposition. The products of combustion or self-accelerating decomposition may be toxic by inhalation. Will float and can be reignited on water surface.
Explosion hazard	Vapours may form explosive mixture with air.
Reactivity in case of fire	Decomposition products may be a hazard to health.
Hazardous decomposition products in case of fire	Formation of toxic gases is possible during heating or in case of fire. Corrosive vapours. Thermal decomposition can lead to the release of irritating gases and vapours.

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.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Spilled material may present a slipping hazard.
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6.1.1. For non-emergency personnel

Protective equipment	Wear recommended personal protective equipment.
Emergency procedures	Evacuate unnecessary personnel. No flames, no sparks. Eliminate all sources of ignition. Explosive vapour/air mixtures may be formed.

6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	Stop leak without risks if possible. Use non-sparking tools. Absorb and/or contain spill with inert material, then place in suitable container. This material and its container must be disposed of in a safe way, and as per local legislation.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust, vapours. 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. Prevent the build-up of electrostatic charge. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	Comply with applicable regulations.
Storage conditions	Keep container tightly closed. Keep cool. Protect from sunlight. Avoid contact with : Air. Store away from other materials. Expiry date: See date printed on box and capsule. Do not use if expiry date has been exceeded!
Incompatible materials	Strong acids. Strong bases. Activator. reducing agents. solid salts and solutions containing heavy metals.
Storage temperature	-20 – 25 °C
Heat and ignition sources	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

HUS4-MAX, B	
Ireland - Occupational Exposure Limits	
OEL TWA [1]	5 mg/m ³
Notes (IE)	Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2021

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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 adequate ventilation.

8.2.2. Personal protection equipment

Personal protective equipment

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Personal protective equipment symbol(s)



8.2.2.1. Eye and face protection

Eye protection

Wear security glasses which protect from splashes

Eye protection:

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

8.2.2.2. Skin protection

Skin and body protection

Long sleeved protective clothing

Hand protection

Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12		EN ISO 374

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls

Avoid release to the environment.

Consumer exposure controls

Avoid contact during pregnancy/while nursing.

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Other information

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	white.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flammability	Not available
Explosive properties	Product is not explosive.
Explosive limits	Not available
Lower explosive limit (LEL)	Not available
Upper explosive limit (UEL)	Not available
Flash point	
Auto-ignition temperature	Not available
Decomposition temperature	Not available
SADT	70 °C
pH	≈ 7
Viscosity, kinematic	0 mm ² /s
Viscosity, dynamic	200 mPa·s
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	23.4 hPa
Vapour pressure at 50 °C	Not available
Density	1.03 g/cm ³
Relative density	Not available
Relative vapour density at 20 °C	Not available
Particle size	Not applicable
Particle size distribution	Not applicable
Particle shape	Not applicable
Particle aspect ratio	Not applicable
Particle aggregation state	Not applicable
Particle agglomeration state	Not applicable
Particle specific surface area	Not applicable
Particle dustiness	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

SECTION 10 Stability and reactivity

10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7).

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

10.2. Chemical stability

Stable under normal conditions. Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Can form explosive mixtures with air.

10.4. Conditions to avoid

May decompose violently at elevated temperatures or in a fire. Burns vigorously. Insoluble in water. Contact with alkalis or acids may cause dangerous decomposition. The products of combustion or self-accelerating decomposition may be toxic by inhalation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Strong acids. Strong bases. Activator. reducing agents. solid salts and solutions containing heavy metals.

10.6. Hazardous decomposition products

Toxic and corrosive gases are released. Toxic and corrosive fumes are released.

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)	Not classified
Skin corrosion/irritation	Not classified pH ≈ 7
Serious eye damage/irritation	Causes serious eye irritation. pH ≈ 7
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified

dibenzoyl peroxide (94-36-0)

IARC group	3 - Not classifiable
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

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Viscosity, kinematic	0 mm ² /s
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11.2. Information on other hazards

No additional information available

SECTION 12 Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	Very toxic to aquatic life with long lasting effects.

dibenzoyl peroxide (94-36-0)

LC50 - Fish [2]	0.0602 mg/l (96h; Oncorhynchus mykiss; ECHA)
EC50 - Crustacea [1]	0.11 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	0.0711 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
NOEC (acute)	0.0316 mg/l (96h; Oncorhynchus mykiss; ECHA)

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

dibenzoyl peroxide (94-36-0)	
NOEC chronic fish	0.001 mg/l

12.2. Persistence and degradability

dibenzoyl peroxide (94-36-0)	
Persistence and degradability	Readily biodegradable in water. Not established. May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

dibenzoyl peroxide (94-36-0)	
Partition coefficient n-octanol/water (Log Pow)	3.71
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

12.4. Mobility in soil

dibenzoyl peroxide (94-36-0)	
Surface tension	No data available (test not performed)
Partition coefficient n-octanol/water (Log Koc)	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.

12.5. Results of PBT and vPvB assessment

HUS4-MAX, B	
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	
Component	
dibenzoyl peroxide (94-36-0)	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

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.
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 20 01 27* - paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 3109	UN 3109	UN 3109	UN 3109

HUS4-MAX, B

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

ADR	IMDG	IATA	RID
14.2. UN proper shipping name			
ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide)	ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide)	Organic peroxide type f, liquid (dibenzoyl peroxide)	ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide)
Transport document description			
UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide), 5.2, (D), ENVIRONMENTALLY HAZARDOUS	UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide), 5.2, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 3109 Organic peroxide type f, liquid (dibenzoyl peroxide), 5.2, ENVIRONMENTALLY HAZARDOUS	UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (dibenzoyl peroxide), 5.2, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)			
5.2	5.2	5.2	5.2
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR) : P1
 Special provisions (ADR) : 122, 274
 Limited quantities (ADR) : 125ml
 Packing instructions (ADR) : P520, IBC520
 Mixed packing provisions (ADR) : MP4
 Transport category (ADR) : 2
 Orange plates :



Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 122, 274
 Packing instructions (IMDG) : P520
 EmS-No. (Fire) : F-J
 EmS-No. (Spillage) : S-R
 Stowage category (IMDG) : D
 Stowage and handling (IMDG) : SW1
 Segregation (IMDG) : SG35, SG36, SG72

Air transport

PCA packing instructions (IATA) : 570



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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

PCA max net quantity (IATA) : 10L
CAO packing instructions (IATA) : 570
Special provisions (IATA) : A20, A150, A802

Rail transport

Special provisions (RID) : 122, 274
Packing instructions (RID) : P520, IBC520

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

EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(a)	HUS4-MAX, B
3(b)	HUS4-MAX, B
3(c)	HUS4-MAX, B

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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.

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

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16 Other information

Abbreviations and acronyms

CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods



HUS4-MAX, B

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Abbreviations and acronyms	
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
ThOD	Theoretical oxygen demand (ThOD)
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Other information None.

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Org. Perox. B	Organic Peroxides, Type B
Org. Perox. F	Organic Peroxides, Type F
Skin Sens. 1	Skin sensitisation, Category 1
H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]		
Org. Perox. F	H242	Expert judgment
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	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.

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Issue date: 14/10/2021 Revision date: 14/10/2021 Version: 1.0

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

1.1. Product identifier

Product form Mixture
Trade name HUS4-MAX, A
Product code BU Anchor

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

1.2.1. Relevant identified uses

Industrial/Professional use spec For professional use only
Use of the substance/mixture Adhesive anchor capsule for anchor fastening in concrete

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Hilti (Fastening Systems) Limited
Unit C4
North City Business Park, Finglas
11 Dublin - Irland
T +353 188 64101
1850-287 387 Call Save - F +353 183 03569
iesales@hilti.com

Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number Schweizerisches Toxikologisches Informationszentrum – 24h Service
+41 44 251 51 51 (international)
+353 188 64101
1850-287 387 Call Save

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Skin sensitisation, Category 1 H317
Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)



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Signal word (CLP)	GHS07
Contains	Warning
Hazard statements (CLP)	2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol; 2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester; 4-tert-butylpyrocatechol
Precautionary statements (CLP)	H317 - May cause an allergic skin reaction. P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352 - IF ON SKIN: Wash with plenty of water. P337+P313 - If eye irritation persists: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
UFI	CAV7-HKFW-081R-A36G

2.3. Other hazards

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

Component	
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	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
1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	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
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	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
4-tert-butylpyrocatechol (98-29-3)	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

Component	
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester(2082-81-7)	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
1,1'-(p-tolylimino)dipropan-2-ol(38668-48-3)	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
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol(27813-02-1)	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
4-tert-butylpyrocatechol(98-29-3)	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

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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]
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester	CAS-No. 2082-81-7 EC-No. 218-218-1 REACH-no 01-2119967415-30	60 – 80	Skin Sens. 1B, H317
1,1'-(p-tolylimino)dipropan-2-ol	CAS-No. 38668-48-3 EC-No. 254-075-1 REACH-no 01-2119980937-17	1 – 3	Acute Tox. 2 (Oral), H300 Eye Irrit. 2, H319 Aquatic Chronic 3, H412
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol	CAS-No. 27813-02-1 EC-No. 248-666-3 EC Index-No. 607-125-00-5 REACH-no 01-2119490226-37	0 – 1	Eye Irrit. 2, H319 Skin Sens. 1, H317
4-tert-butylpyrocatechol	CAS-No. 98-29-3 EC-No. 202-653-9	0 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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	Take off immediately all contaminated clothing. 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. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	Rinse mouth. Get medical advice/attention. Do not induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	May cause severe irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5 Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry powder. Foam. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

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.

Protection during firefighting Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment Use personal protective equipment as required. Equip cleanup crew with proper protection.

Emergency procedures Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment Collect spillage.

Methods for cleaning up This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. 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 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Wear personal protective equipment. 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.

Hygiene measures Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Keep cool. Protect from sunlight. Expiry date: See date printed on box and capsule. Do not use if expiry date has been exceeded!.

Incompatible products Strong bases. Strong acids.

Incompatible materials Sources of ignition. Direct sunlight.

Storage temperature -20 – 25 °C

Heat and ignition sources Keep away from heat and direct sunlight.

7.3. Specific end use(s)

No additional information available

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SECTION 8 Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

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

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Personal protective equipment symbol(s)



8.2.2.1. Eye and face protection

Eye protection

Wear security glasses which protect from splashes

Eye protection:

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

8.2.2.2. Skin protection

Skin and body protection

Long sleeved protective clothing

Hand protection

Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12		EN ISO 374

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

Environmental exposure controls

Avoid release to the environment.

Consumer exposure controls

Avoid contact during pregnancy/while nursing.

Other information

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	light yellow.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flammability	Not available
Explosive limits	Not available
Lower explosive limit (LEL)	Not available
Upper explosive limit (UEL)	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
SADT	
pH	5.7
Viscosity, kinematic	160.55 mm ² /s
Viscosity, dynamic	175 mPa·s
Solubility	Not available
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available
Vapour pressure at 50 °C	Not available
Density	1.09 g/cm ³
Relative density	Not available
Relative vapour density at 20 °C	Not available
Particle size	Not applicable
Particle size distribution	Not applicable
Particle shape	Not applicable
Particle aspect ratio	Not applicable
Particle aggregation state	Not applicable
Particle agglomeration state	Not applicable
Particle specific surface area	Not applicable
Particle dustiness	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

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

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) Not classified

2-Propanoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)

LD50 oral rat	> 5000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >=2000 mg/kg bodyweight; Rat; Experimental value)
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LD50 dermal rabbit	≥ 5000 mg/kg bodyweight (Rabbit; Experimental value)
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2-Propanoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)

LD50 oral rat	10066 mg/kg
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LD50 dermal rat	> 3000 mg/kg
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ATE CLP (oral)	10066 mg/kg bodyweight
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1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)

LD50 oral rat	25 mg/kg
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LD50 dermal rat	> 2000 mg/kg
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ATE CLP (oral)	25 mg/kg bodyweight
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4-tert-butylpyrocatechol (98-29-3)

LD50 oral rat	815 mg/kg bodyweight (Rat; Lethal; ECHA)
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LD50 oral	2820 mg/kg
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LD50 dermal rat	1331 mg/kg bodyweight (Rat; Lethal; ECHA)
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LD50 dermal	630 mg/kg
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ATE CLP (oral)	815 mg/kg bodyweight
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ATE CLP (dermal)	630 mg/kg bodyweight
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Skin corrosion/irritation Not classified

pH 5.7

Serious eye damage/irritation Not classified

pH 5.7

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Not classified

Carcinogenicity Not classified

Reproductive toxicity Not classified

STOT-single exposure Not classified

STOT-repeated exposure Not classified

Aspiration hazard Not classified

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Viscosity, kinematic	160.55 mm ² /s
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11.2. Information on other hazards

No additional information available

SECTION 12 Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)

LC50 - Fish [1]	493 mg/l (48 h; Leuciscus idus; GLP)
EC50 - Crustacea [1]	> 143 mg/l (48 h; Daphnia magna; GLP)
ErC50 algae	97.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
Threshold limit - Algae [1]	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
Threshold limit - Algae [2]	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)

LC50 - Other aquatic organisms [1]	9.79 mg/l
NOEC (acute)	7.51 mg/l
NOEC (chronic)	20 mg/l

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)

LC50 - Fish [1]	≈ 17 mg/l
LC50 - Other aquatic organisms [1]	245 mg/l
EC50 - Crustacea [1]	28.8 mg/l
NOEC (acute)	57.8 mg/l

4-tert-butylpyrocatechol (98-29-3)

LC50 - Fish [1]	0.12 mg/l (96 h, Danio rerio, Lethal, ECHA)
ErC50 algae	10.17 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)

Persistence and degradability	Readily biodegradable in water.
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2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)

Biodegradation	84 %
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4-tert-butylpyrocatechol (98-29-3)

Persistence and degradability	Not readily biodegradable in water.
ThOD	2.4 g O ₂ /g substance

12.3. Bioaccumulative potential

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)

BCF - Fish [1]	≤ 100
BCF - Fish [2]	3.2 Quantitative structure-activity relationship (QSAR)
Partition coefficient n-octanol/water (Log Pow)	0.97 (OECD 102 method)
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500).

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)

Partition coefficient n-octanol/water (Log Pow)	3.1
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1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)

Partition coefficient n-octanol/water (Log Kow)	2.1
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4-tert-butylpyrocatechol (98-29-3)

Partition coefficient n-octanol/water (Log Pow)	1.98 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
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4-tert-butylpyrocatechol (98-29-3)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
Partition coefficient n-octanol/water (Log Koc)	1.9 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

4-tert-butylpyrocatechol (98-29-3)	
Surface tension	No data available (test not performed)
Partition coefficient n-octanol/water (Log Koc)	1.37 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

HUS4-MAX, A	
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	
Component	
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	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
1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	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
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	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
4-tert-butylpyrocatechol (98-29-3)	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

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)

Product/Packaging disposal recommendations

Ecology - waste materials

European List of Waste (LoW) code

Disposal must be done according to official regulations.

After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.

Avoid release to the environment.

08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances

20 01 27* - paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	RID
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Rail transport

Not regulated

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

EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(b)	HUS4-MAX, A ; 2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol ; 2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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.

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

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

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SECTION 16 Other information

Abbreviations and acronyms	
CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
ThOD	Theoretical oxygen demand (ThOD)
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Other information

None.

Full text of H- and EUH-statements:	
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Sens. 1	Skin sensitisation, Category 1



HUS4-MAX, A

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Full text of H- and EUH-statements:

Skin Sens. 1B	Skin sensitisation, category 1B
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Skin Sens. 1	H317	Calculation method
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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.