

HUS4-MAX

Safety information for 2-Component-products

Issue date: 22/06/2022 Revision date: 22/06/2022 Version: 1.0

SECTION 1: Kit identification

1.1 Product identifier

Product name HUS4-MAX

HUSAMAY 10: HUSAMAY 10:

Product code BU Anchor

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

Hilti (Aust.) Pty. Ltd.
Level 5, 1G Homebush Bay Drive
P.O. Box 3217
2138 Rhodes NSW - Australia
T +61 131 292 - F +61 1300 135 042
serviceaustralia@hilti.com

SECTION 2: General information

Restrictions on use For professional use only

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:

Classification of the Product

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Organic Peroxides, Type F H242
Serious eye damage/eye irritation, Category 2A H319
Skin sensitisation, Category 1 H317

2.2. Label elements

Hazard pictograms (GHS AU)





HS02

Signal word (GHS AU) Warning

Hazard statements (GHS AU) H242 - Heating may cause a fire

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

Precautionary statements (GHS AU) P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

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

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

30/06/2022 AU - en 1/23



HUS4-MAX

Safety information for 2-Component-products

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.

2.3. Other hazards not contributing to the classification

No additional information available

Additional information

Foil capsule contains:

Component A: Urethane methacrylate resin Component B: Dibenzoyl peroxide, phlegmatized



Name	General description	Quantity	Unit	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
HUS4-MAX, A		1	pcs (pieces)	Skin Sens. 1, H317
HUS4-MAX, B		1	pcs (pieces)	Org. Perox. F, H242 Eye Irrit. 2A, H319 Skin Sens. 1, H317

SECTION 4: General advice

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.

This material and its container must be disposed of in a safe way, and as per local legislation

For containment Collect spillage.

Incompatible materials Strong acids

Strong acids Strong bases Activator reducing agents

solid salts and solutions containing heavy metals

30/06/2022 AU - en 2/23



HUS4-MAX

Safety information for 2-Component-products

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

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

30/06/2022 AU - en 3/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations Issue date: 22/06/2022 Revision date: 22/06/2022

Version: 1.0

SECTION 1: Product identifier

1.1. GHS Product identifier

Product form Mixture

Trade name HUS4-MAX, B

Product code BU Anchor

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use Adhesive anchor capsule for anchor fastening in concrete

Restrictions on use For professional use only

1.4. Details of manufacturer or importer

Supplier

Hilti (Aust.) Pty. Ltd.

Level 5, 1G Homebush Bay Drive

P.O. Box 3217

2138 Rhodes NSW - Australia T +61 131 292 - F +61 1300 135 042

serviceaustralia@hilti.com

Department issuing data specification sheet:

Hilti Entwicklungsgesellschaft mbH

Hiltistraße 6

86916 Kaufering - Deutschland

T +49 8191 906876 anchor.hse@hilti.com

1.5. Emergency phone number

Emergency number +61 2 8748 1000

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Organic Peroxides, Type F H242
Serious eye damage/eye irritation, Category 2A H319
Skin sensitisation, Category 1 H317

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU)





Signal word (GHS AU) Warning

Contains dibenzoyl peroxide (10 – 25 %)
Hazard statements (GHS AU) H242 - Heating may cause a fire

H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

Precautionary statements (GHS AU) P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. 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 water.

P337+P313 - If eye irritation persists: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

30/06/2022 EN (English) 4/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition and information on ingredients

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
dibenzoyl peroxide	94-36-0	10 – 25	Org. Perox. B, H241 Eye Irrit. 2A, H319 Skin Sens. 1, H317

SECTION 4: First aid measures

4.1. Description of necessary 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.

4.2. Symptoms caused by exposure

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

Symptoms/effects after eye contact Causes serious eye irritation.

4.3. Medical attention and special treatment

SECTION 5: Fire-fighting 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. Specific hazards arising from the chemical

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.

General measures Spilled material may present a slipping hazard.

Hazardous decomposition products in case of Formation of toxic gases is possible during heating or in case of fire. Corrosive vapours.

fire Thermal decomposition can lead to the release of irritating gases and vapours.

5.3. Special protective equipment and precautions for fire-fighters

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.

30/06/2022 EN (English) 5/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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

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.

6.2. Environmental precautions

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

6.3. Methods and materials 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.

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.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

HUS4-MAX, B		
Australia - Occupational Exposure Limits		
Local name	Benzoyl peroxide (Dibenzoyl peroxide)	
OES TWA [1]	5 mg/m³	
Remark (AU)	Sen - Respiratory and/or Skin Sensitiser.	
Regulatory reference	Workplace exposure standards for airborne contaminants (2019)	

30/06/2022 EN (English) 6/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

8.2. Biological Monitoring

No additional information available

8.3. Engineering controls

Appropriate engineering controls Ensure adequate ventilation.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

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.

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

Eye protection Wear security glasses which protect from splashes

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

Skin and body protection Long sleeved protective clothing

Personal protective equipment symbol(s)







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

Physical state Liquid

Appearance No data available

Colour white

Odour characteristic
Odour threshold
No data available

pH ≈ 7

Relative evaporation rate (butylacetate=1)

Melting point / Freezing point

No data available

Boiling point

No data available

No data available

No data available

Auto-ignition temperature

Flammability (solid, gas)

No data available

No data available

Vapour pressure Vapour pressure : 23.4 hPa

Relative density

Density

Density: 1.03 g/cm³

Solubility

Partition coefficient n-octanol/water (Log Pow)

No data available

Viscosity, kinematic 0 mm²/s
Viscosity, dynamic 200 mPa.s

30/06/2022 EN (English) 7/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

Explosive properties Product is not explosive. Explosive limits No data available Minimum ignition energy No data available

70 °C SADT

Fat solubility No data available

SECTION 10: Stability and reactivity

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

Chemical stability Stable under normal conditions. Stable under recommended handling and storage conditions

(see section 7).

Possibility of hazardous reactions Can form explosive mixtures with air.

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.

Incompatible materials Strong acids. Strong bases. Activator. reducing agents. solid salts and solutions containing

heavy metals.

Hazardous decomposition products Toxic and corrosive gases are released. Toxic and corrosive fumes are released.

SECTION 11: Toxicological information

Not classified Acute toxicity (oral) 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.

Not classified

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Carcinogenicity Not classified Reproductive toxicity Not classified STOT-single exposure Not classified STOT-repeated exposure Not classified Aspiration hazard Not classified

HUS4-MAX, B

Viscosity, kinematic 0 mm²/s

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

Ecotoxicity 12.1.

Hazardous to the aquatic environment, short-

term (acute)

Not classified

Hazardous to the aquatic environment, long-

term (chronic)

Not classified

30/06/2022 EN (English) 8/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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)
NOEC chronic fish	0.001 mg/l
Partition coefficient n-octanol/water (Log Pow)	3.71
Organic Carbon Normalized Adsorption Coefficient (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)

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	
Organic Carbon Normalized Adsorption Coefficient (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)	
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 Pow)	3.71	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology3.8 (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. Other adverse effects

Ozone Not classified

Other adverse effects No additional information available

HUS4-MAX, B		
Fluorinated greenhouse gases False		
dibenzoyl peroxide (94-36-0)		
Fluorinated greenhouse gases	False	

SECTION 13: Disposal considerations

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.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

30/06/2022 EN (English) 9/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

ADR	IMDG	IATA	RID
14.1. UN number or ID number	er -		
UN 3109	UN 3109	UN 3109	UN 3109
14.2. UN proper shipping nam	ne		
ORGANIC PEROXIDE TYPE F,	ORGANIC PEROXIDE TYPE F,	Organic peroxide type f, liquid	ORGANIC PEROXIDE TYPE F,
LIQUID (dibenzoyl peroxide)	LIQUID (dibenzoyl peroxide)	(dibenzoyl peroxide)	LIQUID (dibenzoyl peroxide)
Transport document description			
UN 3109 ORGANIC PEROXIDE	UN 3109 ORGANIC PEROXIDE	UN 3109 Organic peroxide type f,	UN 3109 ORGANIC PEROXIDE
TYPE F, LIQUID (dibenzoyl	TYPE F, LIQUID (dibenzoyl	liquid (dibenzoyl peroxide), 5.2,	TYPE F, LIQUID (dibenzoyl
peroxide), 5.2, (D),	peroxide), 5.2, MARINE	ENVIRONMENTALLY	peroxide), 5.2,
ENVIRONMENTALLY	POLLUTANT/ENVIRONMENTAL	HAZARDOUS	ENVIRONMENTALLY
HAZARDOUS	LY HAZARDOUS		HAZARDOUS
14.3. Transport hazard class(es)			
5.2	5.2	5.2	5.2
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:	Dangerous for the environment:	Dangerous for the environment:	Dangerous for the environment:
Yes	Yes	Yes	Yes
	Marine pollutant: Yes		
No supplementary information avail	able		

14.6. Special precautions for user

Overland transport

P1 Classification code (ADR) Special provisions (ADR) 122, 274 Limited quantities (ADR) 125ml Packing instructions (ADR) P520, IBC520 Mixed packing provisions (ADR) MP4

Transport category (ADR)

539 3109

Tunnel restriction code (ADR)

Transport by sea

Orange plates

Special provisions (IMDG) 122, 274 Packing instructions (IMDG) P520 F-J EmS-No. (Fire) 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

30/06/2022 EN (English) 10/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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

14.8. Hazchem or Emergency Action Code

Hazchem Code Not applicable

SECTION 15: Regulatory information

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

Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals All the chemicals contained in this product are listed introductions

(AICIS Inventory) status

15.2. International agreements

No additional information available

SECTION 16: Other information

30/06/2022 EN (English) 11/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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

22/06/2022 None.

Other information Classification:

Revision date

Org. Perox. F	H242
Eye Irrit. 2A	H319
Skin Sens. 1	H317

Full text of H-statements:

Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A	
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

30/06/2022 EN (English) 12/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

H	242	Heating may cause a fire	
H	317	May cause an allergic skin reaction	
Н	319	Causes serious eye irritation	

SDS_AU_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.

30/06/2022 EN (English) 13/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations Issue date: 22/06/2022 Revision date: 22/06/2022

Version: 1.0

SECTION 1: Product identifier

1.1. GHS Product identifier

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

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use Adhesive anchor capsule for anchor fastening in concrete

Restrictions on use For professional use only

1.4. Details of manufacturer or importer

Supplier

Hilti (Aust.) Pty. Ltd.

Level 5, 1G Homebush Bay Drive

P.O. Box 3217

2138 Rhodes NSW - Australia T +61 131 292 - F +61 1300 135 042

serviceaustralia@hilti.com

Department issuing data specification sheet:

Hilti Entwicklungsgesellschaft mbH

Hiltistraße 6

86916 Kaufering - Deutschland

T +49 8191 906876 anchor.hse@hilti.com

1.5. Emergency phone number

Emergency number +61 2 8748 1000

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Skin sensitisation, Category 1 H317

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU)



Signal word (GHS AU)

Warning

Contains

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (60 – 80 %); 2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (0.1 – 1 %); 4-tert-butylpyrocatechol (0.1 – 1 %)

Hazard statements (GHS AU)

H317 - May cause an allergic skin reaction

Precautionary statements (GHS AU)

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.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition and information on ingredients

30/06/2022 EN (English) 14/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester	2082-81-7	60 – 80	Skin Sens. 1B, H317
1,1'-(p-tolylimino)dipropan-2-ol	38668-48-3	1 – 2.5	Acute Tox. 2 (Oral), H300 Eye Irrit. 2A, H319
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol	27813-02-1	0.1 – 1	Eye Irrit. 2A, H319 Skin Sens. 1, H317
4-tert-butylpyrocatechol	98-29-3	0.1 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

SECTION 4: First aid measures

4.1. Description of necessary 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. Symptoms caused by exposure

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

4.3. Medical attention and special treatment

SECTION 5: Fire-fighting 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.

5.2. Specific hazards arising from the chemical

General measures Spilled material may present a slipping hazard.

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

5.3. Special protective equipment and precautions for fire-fighters

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.

30/06/2022 EN (English) 15/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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 materials 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.

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.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

No additional information available

8.2. Biological Monitoring

No additional information available

8.3. Engineering controls

Appropriate engineering controls Ensure good ventilation of the work station.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

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.

30/06/2022 EN (English) 16/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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

Eye protection Wear security glasses which protect from splashes

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

Skin and body protection Long sleeved protective clothing

Personal protective equipment symbol(s)







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

Physical state Liquid

Appearance No data available
Colour light yellow
Odour characteristic
Odour threshold No data available

pH 5.7

Relative evaporation rate (butylacetate=1) No data available Melting point / Freezing point No data available Boiling point No data available Flash point No data available Auto-ignition temperature No data available No data available Flammability (solid, gas) Vapour pressure No data available Relative density No data available Density Density: 1.09 g/cm3 Solubility No data available Partition coefficient n-octanol/water (Log Pow) No data available 160.55 mm²/s Viscosity, kinematic Viscosity, dynamic 175 mPa.s Explosive properties No data available Explosive limits No data available Minimum ignition energy No data available

SADT

Fat solubility No data available

SECTION 10: Stability and reactivity

Reactivity

No additional information available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

No additional information available.

30/06/2022 EN (English) 17/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

Conditions to avoid Direct sunlight. Extremely high or low temperatures.

Incompatible materials Strong acids. Strong bases.

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

Acute toxicity (oral)

Acute toxicity (dermal)

Acute toxicity (inhalation)

Not classified

Not classified

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)		
LD50 oral rat	10066 mg/kg	
LD50 dermal rat	> 3000 mg/kg	
1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)		
LD50 oral rat	25 mg/kg	
LD50 dermal rat	> 2000 mg/kg	
2-Propenoic 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)	
LD50 dermal rabbit	≥ 5000 mg/kg bodyweight (Rabbit; Experimental value)	
4-tert-butylpyrocatechol (98-29-3)		
LD50 oral rat	815 mg/kg bodyweight (Rat; Lethal; ECHA)	
LD50 oral	2820 mg/kg	
LD50 dermal rat	1331 mg/kg bodyweight (Rat;Lethal; ECHA)	
LD50 dermal	630 mg/kg	
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	
HUS4-MAX, A		
Viscosity, kinematic	160.55 mm ² /s	

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

Hazardous to the aquatic environment, short-

term (acute)

Not classified

Hazardous to the aquatic environment, long-

term (chronic)

Not classified

30/06/2022 EN (English) 18/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

2-Propenoic acid, 2-methyl-, 1,4-butanediyl e	ster (2082-81-7)
LC50 - Other aquatic organisms [1]	9.79 mg/l
NOEC (acute)	7.51 mg/l
NOEC (chronic)	20 mg/l
Partition coefficient n-octanol/water (Log Pow)	3.1
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
Partition coefficient n-octanol/water (Log Kow)	2.1
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)
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)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.9 (log Koc, Calculated value)
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)
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)
Partition coefficient n-octanol/water (Log Pow)	1.98 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (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)

12.2. Persistence and degradability

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)			
Not rapidly degradable	Not rapidly degradable		
Biodegradation	84 %		
2-Propenoic acid, 2-methyl-, monoester wit	h 1,2-propanediol (27813-02-1)		
Not rapidly degradable			
Persistence and degradability	Readily biodegradable in water.		
4-tert-butylpyrocatechol (98-29-3)			
Not rapidly degradable			
Persistence and degradability Not readily biodegradable in water.			
ThOD	2.4 g O₂/g substance		

12.3. Bioaccumulative potential

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)			
Partition coefficient n-octanol/water (Log Pow)	3.1		
1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)		
Partition coefficient n-octanol/water (Log Kow)	2.1		
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)		

30/06/2022 EN (English) 19/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.9 (log Koc, Calculated value)	
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500).	
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)	
Organic Carbon Normalized Adsorption Coefficient (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)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	

12.4. Mobility in soil

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)		
Partition coefficient n-octanol/water (Log Pow)	3.1	
1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)		
Partition coefficient n-octanol/water (Log Kow)	2.1	
2-Propenoic acid, 2-methyl-, monoester with	1,2-propanediol (27813-02-1)	
Partition coefficient n-octanol/water (Log Pow)	0.97 (OECD 102 method)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology1.9 (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 Pow)	1.98 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology1.37 (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. Other adverse effects

Ozone Not classified

Other adverse effects No additional information available

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

SECTION 13: Disposal considerations

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.

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.

30/06/2022 EN (English) 20/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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		
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

14.8. Hazchem or Emergency Action Code

Hazchem Code Not applicable

SECTION 15: Regulatory information

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

Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals (AICIS Inventory) status

All the chemicals contained in this product are listed introductions

15.2. International agreements

No additional information available

SECTION 16: Other information

30/06/2022 EN (English) 21/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

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

22/06/2022 None.

Other information Classification:

Revision date

Skin Sens. 1	H317
Full text of H-statements:	
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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. 2A	Serious eye damage/eye irritation, Category 2A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B

30/06/2022 EN (English) 22/23



Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations

Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
H300	Fatal if swallowed
H302	Harmful if swallowed
H311	Toxic 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
H410	Very toxic to aquatic life with long lasting effects

SDS_AU_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.

30/06/2022 EN (English) 23/23