

Hilti Crack Injection System CI 060

Safety information for 2-Component-products

Date of issue: 09/08/2016 Revision date: 09/08/2016 Supersedes: 09/08/2016 Version: 8.0

SECTION 1: Kit identification

1.1 Product identifier

Name Hilti Crack Injection System CI 060

Product code BU Chemicals

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

Hilti (New Zealand) Ltd. 525 Great South Road 1061 Auckland - Neuseeland T +64 9 571 9995 ; 800 444 584 toll free - F +64 9526 7780

SECTION 2: General information

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

SECTION 3:

servicenz@hilti.com

Classification of the Product

Classification according to the United Nations GHS (Rev. 4, 2011)

Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS-UN)



GHS07





Signal word (GHS-UN) Danger

Hazard statements (GHS-UN) H302+H312 - Harmful if swallowed or in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H341 - Suspected of causing genetic defects

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-UN) P260 - Do not breathe vapours

P273 - Avoid release to the environment

P280 - Wear eye protection, protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing

P308+P313 - IF exposed or concerned: Get medical advice/attention

Additional information

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Hilti Crack Injection System CI 060

Safety information for 2-Component-products

Name	General description	Quantity	Unit	Classification according to the United Nations GHS (Rev. 4, 2011)
CI 060, B		1	pcs (pieces)	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
CI 060, A		1	pcs (pieces)	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411

SECTION 4: General advice

No data available

SECTION 5: Safe handling advice

Environmental precautions Avoid release to the environment

Storage conditions Store locked up

Store in a well-ventilated place

Keep cool

Precautions for safe handling Ensure good ventilation of the work station

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Do not get in eyes, on skin, or on clothing Wear personal protective equipment

Avoid breathing vapours

Methods for cleaning up Notify authorities if product enters sewers or public waters

For containment Collect spillage

SECTION 6: First aid measures

First-aid measures general

Symptoms/injuries after skin contact

First-aid measures after eye contact Rinse eyes with water as a precaution

First-aid measures after ingestion Rinse mouth

Call a poison center or a doctor if you feel unwell

First-aid measures after inhalation Remove person to fresh air and keep comfortable for breathing

First-aid measures after skin contact Wash skin with plenty of water Take off contaminated clothing

If skin irritation or rash occurs: Get medical advice/attention IF exposed or concerned: Get medical advice/attention

Call a poison center or a doctor if you feel unwell

SECTION 7: Fire fighting measures

Protection during firefighting Do not attempt to take action without suitable protective equipment

Self-contained breathing apparatus Complete protective clothing

May cause an allergic skin reaction

Hazardous decomposition products in case of

fire

Toxic fumes may be released

SECTION 8: Other information

No data available

12/08/2016 NZ - en 2/20



Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Date of issue: 09/08/2016

Version: 8.0

Revision date: 09/08/2016

Supersedes: 09/08/2016

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

1.1. Product identifier

Product form Mixture CI 060, A Name Product code **BU Chemicals**

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Hilti (New Zealand) Ltd. 525 Great South Road 1061 Auckland - Neuseeland T +64 9 571 9995 ; 800 444 584 toll free - F +64 9526 7780 servicenz@hilti.com

Supplier

Hilti (New Zealand) Ltd. 525 Great South Road 1061 Auckland - Neuseeland T +64 9 571 9995 ; 800 444 584 toll free - F +64 9526 7780

servicenz@hilti.com

Department issuing data specification sheet

Hilti AG Feldkircherstraße 100 9494 Schaan - Liechtenstein T +423 234 2111 - F +423 234 2965

www.hilti.com

1.4. Emergency telephone number

Emergency number Schweizerisches Toxikologisches Informationszentrum - 24h Service

+41 44 251 51 51 (international)

+64 9 571 9995 ; 800 444 584 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS (Rev. 4, 2011)

Flam. Liq. Not classified

Skin Irrit. 2 H315 Eye Irrit. 2A H319 Skin Sens. 1 H317 H341 Muta. 2 Aquatic Acute 2 H401 Aquatic Chronic 2 H411 Full text of hazard classes and H-statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

EN (English)

Hazard pictograms (GHS-UN)



GHS07





GHS08

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Signal word (GHS-UN) Warning

Hazardous ingredients Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700; 2,3-epoxypropyl o-tolyl ether

Hazard statements (GHS-UN) H315 - Causes skin irritation

H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-UN) P273 - Avoid release to the environment

P280 - Wear eye protection, protective clothing, protective gloves

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

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing

P308+P313 - IF exposed or concerned: Get medical advice, medical attention P333+P313 - If skin irritation or rash occurs: Get medical advice, medical attention

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700	(CAS No) 25068-38-6	60 - 80	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
2,3-epoxypropyl o-tolyl ether	(CAS No) 2210-79-9	25 - 40	Muta. 2, H341 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical

advice.

First-aid measures after skin contact

Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

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First-aid measures after eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/injuries after skin contact Burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact Serious damage to eyes.

Symptoms/injuries after ingestion Burns.

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

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 Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1.For non-emergency personnel

Emergency procedures Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment Collect spillage.

Methods for cleaning up Take up liquid spill into absorbent material.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Ensure good ventilation of the work station. Obtain special instructions before use. Do not

handle until all safety precautions have been read and understood. Avoid contact with skin and

eyes. Do not breathe vapours. Wear personal protective equipment.

Hygiene measures Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed

out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands

after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

8.2. Appropriate engineering controls

Appropriate engineering controls Ensure good ventilation of the work station.

Environmental exposure controls Avoid release to the environment.

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

No data available

Hand protection

Туре	Material	Permeation
Reusable gloves	Butyl rubber, Fluoroelastomer (FKM), Polyvinylalcohol (PVA)	3 (> 60 minutes)

Eye protection

<u> </u>	1	
Туре	Use	Characteristics
Safety glasses		

Skin and body protection Respiratory protection Wear suitable protective clothing

Wear respiratory protection



Odour threshold





8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Colour Colourless.
Odour mild.

pH No data available
Relative evaporation rate (butylacetate=1) No data available
Melting point Not applicable
Freezing point No data available
Boiling point No data available

Flash point 138 °C

Auto-ignition temperature No data available

Decomposition temperature > 200 °C

Flammability (solid, gas) Not applicable

Vapour pressure 0.0075 mm Hg

Relative vapour density at 20 °C No data available

Relative density No data available

Density 1.15 kg/l

Solubility

No data available
Log Pow

No data available
Viscosity, kinematic

Viscosity, dynamic

Explosive properties

No data available
Oxidising properties

No data available
Explosive limits

No data available

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) Not classified

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)		
LD50 oral rat	> 2000 mg/kg (Rat; OECD 420: Acute Oral toxicity – Acute Toxic Class Method; Experimental	
	value)	
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)	
2,3-epoxypropyl o-tolyl ether (2210-79-9)		
LD50 oral rat	rat > 5000 mg/kg (Rat)	
LD50 dermal rat	D50 dermal rat > 2000 mg/kg (Rat)	
LC50 inhalation rat (mg/l) 6.09 mg/l/4h (Rat)		
Skin corrosion/irritation Causes skin irritation.		
Serious eye damage/irritation Causes serious eye irritation.		
Respiratory or skin sensitisation May cause an allergic skin reaction.		

Suspected of causing genetic defects.

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated exposure)

Aspiration hazard

Not classified

Not classified

Not classified

SECTION 12: Ecological information

12.1. Toxicity

Germ cell mutagenicity

Ecology - general Toxic to aquatic life with long lasting effects.

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)		
LC50 fish 1	1.2 mg/l (96 h; Oncorhynchus mykiss; Lethal)	
EC50 Daphnia 1	1.1 - 2.8 mg/l (48 h; Daphnia magna; Locomotor effect)	
LC50 fish 2	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)	
Threshold limit algae 1	> 11 mg/l (72 h; Scenedesmus sp.)	
Threshold limit algae 2	4.2 mg/l (72 h; Scenedesmus sp.)	
2,3-epoxypropyl o-tolyl ether (2210-79-9)		
LC50 fish 1	1 - 10 mg/l (Pisces)	
EC50 Daphnia 1	1 - 10 mg/l (Invertebrata)	

12.2. Persistence and degradability

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)		
Persistence and degradability Not readily biodegradable in water. Hydrolysis in water. Low potential for adsorption in soil.		
2,3-epoxypropyl o-tolyl ether (2210-79-9)		
Persistence and degradability Not readily biodegradable in water. Biodegradability in soil: no data available. Photodegradatic		
	in the air.	

12.3. Bioaccumulative potential

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)		
BCF other aquatic organisms 1	3 - 31	
Log Pow	>= 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
2,3-epoxypropyl o-tolyl ether (2210-79-9)		
Log Pow	2.16 (Estimated value)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	

12.4. Mobility in soil

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)	
Surface tension	0.0 587-0.0589,20 °C

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number	
UN-No. (ADR)	3082
UN-No. (IMDG)	3082
UN-No. (IATA)	3082
UN-No. (ADN)	3082
UN-No. (RID)	3082

14.2. UN proper shipping name

UN-No. (RID)

Proper Shipping Name (ADR) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Proper Shipping Name (IMDG)

Proper Shipping Name (IATA) Environmentally hazardous substance, liquid, n.o.s.

Proper Shipping Name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Proper Shipping Name (RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport document description (ADR) UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E)

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Transport document description (IMDG)

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) 9
Danger labels (ADR) 9



IMDG

Transport hazard class(es) (IMDG) 9
Danger labels (IMDG) 9



IATA

Transport hazard class(es) (IATA) 9
Hazard labels (IATA) 9



ADN

Transport hazard class(es) (ADN) 9
Danger labels (ADN) 9



RID

Transport hazard class(es) (RID) 9
Danger labels (RID) 9



14.4. Packing group

Packing group (ADR) III
Packing group (IMDG) III

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Packing group (IATA) III
Packing group (ADN) III
Packing group (RID) III

14.5. Environmental hazards

Dangerous for the environment Yes (ADR 5.2.1.8.1 derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5

ka))

Marine pollutant Yes (ADR 5.2.1.8.1 derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5

kg))

Other information No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) M6

Special provisions (ADR) 274, 335, 601

Limited quantities (ADR) 5

Packing instructions (ADR) P001, IBC03, LP01, R001

Mixed packing provisions (ADR) MP19

Orange plates

90 3082

Tunnel restriction code (ADR) E

EAC code •3Z

- Transport by sea

Special provisions (IMDG) 274, 335, 969

Limited quantities (IMDG) 5

Packing instructions (IMDG) P001, LP01
EmS-No. (Fire) F-A
EmS-No. (Spillage) S-F

Stowage category (IMDG)

A
MFAG-No

171

- Air transport

PCA packing instructions (IATA) 964
PCA max net quantity (IATA) 450L

Special provisions (IATA) A97, A158, A197

- Inland waterway transport

Classification code (ADN) M6

Special provisions (ADN) 274, 335, 61

Limited quantities (ADN) 5 L

Excepted quantities (ADN) E1

Carriage permitted (ADN) T

Equipment required (ADN) PP

Number of blue cones/lights (ADN) 0

Carriage prohibited (ADN) No

Not subject to ADN No

- Rail transport

Special provisions (RID) 274, 335, 601

Limited quantities (RID) 5L

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Packing instructions (RID) P001, IBC03, LP01, R001

Carriage prohibited (RID)

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

No additional information available

SECTION 16: Other information

Full text of H-statements:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H341	Suspected of causing genetic defects
H411	Toxic to aquatic life with long lasting effects

SDS_UN_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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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Date of issue: 09/08/2016 Revision date: 12/08/2016 Supersedes: 09/08/2016

Version: 8.0

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

1.1. Product identifier

Product form Mixture CI 060, B Name Product code **BU Chemicals**

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Hilti (New Zealand) Ltd. 525 Great South Road 1061 Auckland - Neuseeland T +64 9 571 9995 ; 800 444 584 toll free - F +64 9526 7780 servicenz@hilti.com

Supplier

Hilti (New Zealand) Ltd. 525 Great South Road 1061 Auckland - Neuseeland T +64 9 571 9995 ; 800 444 584 toll free - F +64 9526 7780

Department issuing data specification sheet

Hilti AG Feldkircherstraße 100 9494 Schaan - Liechtenstein T +423 234 2111 chemicals.hse@hilti.com

servicenz@hilti.com

1.4. Emergency telephone number

Emergency number Schweizerisches Toxikologisches Informationszentrum - 24h Service

+41 44 251 51 51 (international)

+64 9 571 9995 ; 800 444 584 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS (Rev. 4, 2011)

Flam. Liq. Not classified

H302 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) H312 Skin Corr. 1A H314 H317 Skin Sens. 1 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Full text of hazard classes and H-statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS-UN)





GHS05 GHS07

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Signal word (GHS-UN) Danger

Hazardous ingredients pentaethylenehexamine; Benzyl alcohol

Hazard statements (GHS-UN) H302+H312 - Harmful if swallowed or in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-UN) P260 - Do not breathe vapours

P273 - Avoid release to the environment

P280 - Wear eye protection, protective clothing, protective gloves

P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
pentaethylenehexamine	(CAS No) 4067-16-7	60 - 80	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzyl alcohol	(CAS No) 100-51-6	10 - 25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical

advice.

First-aid measures after skin contact Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a

physician immediately.

First-aid measures after eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion Rinse mouth. Call a physician immediately.

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

Symptoms/injuries after skin contact Burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact Serious damage to eyes.

Symptoms/injuries after ingestion Burns.

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

Treat symptomatically.

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting

Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1.For non-emergency personnel

Emergency procedures Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment Collect spillage.

Methods for cleaning up Take up liquid spill into absorbent material.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe

vapours. Wear personal protective equipment.

Hygiene measures Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed

out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands

after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls Ensure good ventilation of the work station.

Environmental exposure controls Avoid release to the environment.

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

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

Hand protection

Туре	Material	Permeation
Reusable gloves	Butyl rubber, Fluoroelastomer (FKM), Polyvinylalcohol (PVA)	3 (> 60 minutes)

Eye protection

Туре	Use	Characteristics
Safety glasses		

Skin and body protection

Wear suitable protective clothing

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment







8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquidColourBlack.OdourAmine-like.Odour thresholdNo data available

pH > 13

Relative evaporation rate (butylacetate=1)

Melting point

No data available

Not applicable

No data available

Boiling point

No data available

Flash point > 60 °C

Auto-ignition temperature

Decomposition temperature

No data available

Relative vapour density at 20 °C

Relative density

No data available

Density 1.05 kg/l

Solubility

No data available
Log Pow

No data available
Viscosity, kinematic

Viscosity, dynamic

Explosive properties

No data available
No data available
No data available
Explosive limits

No data available

9.2. Other information

No additional information available

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Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong acids. Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) Oral: Harmful if swallowed.

ATE CLP (oral)	1782.669 mg/kg bodyweight
ATE CLP (dermal)	1222.222 mg/kg bodyweight
pentaethylenehexamine (4067-16-7)	
LD50 oral rat	1600 mg/kg (Rat)
Benzyl alcohol (100-51-6)	
LD50 oral rat	1620 mg/kg
LC50 inhalation rat (mg/l)	> 4178 mg/m³
Skin corrosion/irritation	Causes severe skin burns and eye damage.
	11 40

pH: > 13

Serious eye damage/irritation Serious eye damage, category 1, implicit

pH: > 13

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity (single exposure)

Not classified

Not classified

Not classified

Not classified

Not classified

exposure)

Aspiration hazard Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general Very toxic to aquatic life with long lasting effects.

pentaethylenehexamine (4067-16-7)	
LC50 fish 1	180 mg/l (Poecilia reticulata)
Threshold limit algae 1	0.7 mg/l (Selenastrum capricornutum; Biomass)

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12.2. Persistence and degradability

pentaethylenehexamine (4067-16-7)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

pentaethylenehexamine (4067-16-7)	
Log Pow	-1.6 (QSAR)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	2735
UN-No. (IMDG)	2735
UN-No. (IATA)	2735
UN-No. (ADN)	2735
UN-No. (RID)	2735

14.2. UN proper shipping name

Proper Shipping Name (ADR)

AMINES, LIQUID, CORROSIVE, N.O.S.

Proper Shipping Name (IMDG)

AMINES, LIQUID, CORROSIVE, N.O.S.

Proper Shipping Name (IATA) Amines, liquid, corrosive, n.o.s.

Proper Shipping Name (ADN) AMINES, LIQUID, CORROSIVE, N.O.S. Proper Shipping Name (RID) AMINES, LIQUID, CORROSIVE, N.O.S.

Transport document description (ADR)
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S., 8, III, (E)
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S., 8, III
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S., 8, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) 8
Danger labels (ADR) 8



IMDG

Transport hazard class(es) (IMDG) 8

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Danger labels (IMDG)

8



IATA

Transport hazard class(es) (IATA) 8
Hazard labels (IATA) 8



ADN

Transport hazard class(es) (ADN) 8
Danger labels (ADN) 8



RID

Transport hazard class(es) (RID) 8
Danger labels (RID) 8



14.4. Packing group

Packing group (ADR) III
Packing group (IMDG) III
Packing group (IATA) III
Packing group (ADN) III
Packing group (RID) III

14.5. Environmental hazards

Dangerous for the environment

Yes (ADR 5.2.1.8.1 derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg))

Marine pollutant Yes (ADR 5.2.1.8.1 derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5

kg))

Other information No supplementary information available

14.6. Special precautions for user

- Overland transport

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Classification code (ADR) C7
Special provisions (ADR) 274
Limited quantities (ADR) 11

Packing instructions (ADR) P001, IBC02
Mixed packing provisions (ADR) MP15

Orange plates

80 2735

Tunnel restriction code (ADR) E
EAC code 2X

- Transport by sea

Special provisions (IMDG)

Limited quantities (IMDG)

Packing instructions (IMDG)

EmS-No. (Fire)

F-A

S-B

S-B

EmS-No. (Spillage) S-B Stowage category (IMDG) A MFAG-No 153

- Air transport

PCA packing instructions (IATA) 852
PCA max net quantity (IATA) 5L
Special provisions (IATA) A3

- Inland waterway transport

Classification code (ADN) C7 274 Special provisions (ADN) 5 L Limited quantities (ADN) E1 Excepted quantities (ADN) Carriage permitted (ADN) Т PP, EP Equipment required (ADN) Number of blue cones/lights (ADN) 0 Carriage prohibited (ADN) No Not subject to ADN No

- Rail transport

Special provisions (RID) 274 Limited quantities (RID) 5L

Packing instructions (RID) P001, IBC03, LP01, R001

Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

No additional information available

SECTION 16: Other information

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Full text of H-statements:

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
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

SDS_UN_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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