

according to the United Nations GHS (Rev. 4, 2011) Issue date: 01/10/2021 Revision date: 01/10/2021

Supersedes: 07/10/2019

Version: 6.0

SECTION 1: Identification

1.1. GHS Product identifier

Product form Trade name UN-No. (ADR) Product code Mixture CP 678 3077 BU Fire Protection



1.2. Other means of identification

No additional information available

1.3.	.3. Recommended use of the chemical and restrictions on use		
Use of the substance/mixture		Firestop coating	
1.4.	Supplier's details		
Supp	lier	Department issuing data specification sheet	
Hilti (South Africa) (Pty) Ltd.	Hilti AG	
2 Tug	ela Lane, Waterfall Logistics Precinct	Feldkircherstraße 100	
Corner Bridal Veil Road and R101		9494 Schaan - Liechtenstein	
2090 Midrand - South Africa		T +423 234 2111	
T +2711 237300 - F +2711 2373111			
1.5. Emergency phone number			
Emergency number		Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +2711 237300	

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS	3	
Carcinogenicity, Category 2	H351	Calculation method
Reproductive toxicity, Category 2	H361	Calculation method
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410	Calculation method
Full text of H-statements: see section 16		
Adverse physicochemical, human health and environmental effects	Suspected of causing cancer,Ha	armful to aquatic life with long lasting effects.



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

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)

	GHS08 GHS09
Signal word (GHS UN)	Warning
Hazardous ingredients	Tris[2-chloro-1-(chloromethyl)ethyl] phosphate; melamine
Hazard statements (GHS UN)	H351 - Suspected of causing cancer H361 - Suspected of damaging fertility or the unborn child H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (GHS UN)	 P201 - Obtain special instructions before use. P273 - Avoid release to the environment. P280 - Wear eye protection, protective clothing, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water/ P308+P313 - IF exposed or concerned: Get medical advice, medical attention.

 $\boldsymbol{\wedge}$

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
melamine	(CAS-No.) 108-78-1	10 – 15	Acute toxicity (oral), Category 5, H303 Carcinogenicity, Category 2, H351 Reproductive toxicity, Category 2, H361 Hazardous to the aquatic environment - Acute Hazard Not classified
Tris[2-chloro-1-(chloromethyl)ethyl] phosphate	(CAS-No.) 13674-87-8	1 – 5	Flammable liquids Not classified Acute toxicity (dermal) Not classified Acute toxicity (inhalation:dust,mist) Not classified Carcinogenicity, Category 2, H351 Hazardous to the aquatic environment — Acute Hazard, Category 2, H401 Hazardous to the aquatic environment — Chronic Hazard, Category 1, H410 (M=10)

Full text of H-statements: see section 16

SECTION 4: First-aid measures		
4.1. Description of necessary first-a	id measures	
First-aid measures general	IF exposed or concerned: Get medical advice/attention.	
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.	
First-aid measures after skin contact	Wash skin with plenty of water.	
First-aid measures after eye contact	Rinse eyes with water as a precaution.	



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First-aid measures after ingestion Get medical advice/attention if you feel unwell. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

No additional information available

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SEC	TION 5: Fire-fighting measures	
5.1.	Suitable extinguishing media	
Suita	ble extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.
5.2.	Specific hazards arising from the ch	nemical
Haza fire	rdous decomposition products in case of	Carbon dioxide. Carbon monoxide.
5.3.	Special protective actions for fire-fig	ghters
Prote	ction 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.	5.1.1. For non-emergency personnel			
Emerge	ency procedures	Ventilate spillage area.		
6.1.2.	For emergency responders			
Protect	ive 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 rel	Avoid release to the environment.			
6.3.	Methods and materials for containment	nt and cleaning up		
Method	ls for cleaning up	Mechanically recover the product. Notify authorities if product enters sewers or public waters.		
Other i	nformation	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. Wear personal protective equipment.		
Hygiene measures	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 in a dry place. Store locked up. Store in a well-ventilated place. Keep cool.



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls Environmental exposure controls Ensure good ventilation of the work station. Avoid release to the environment.

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

Hand protection Protective gloves					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)			EN ISO 374

Eye protection

Туре	Field of application	Characteristics	Standard
Safety glasses Droplet			EN 166, EN 170
Skin and body protection	Wear suitable protective clothing		
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. During spraying we suitable respiratory equipment		bry equipment. During spraying wear
Device	Filter type	Condition	Standard

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

Ş	9.1. Basic physic	al and chemical propertie	S
	Physical state		Solid
	Appearance		Pasty
	Molecular mass		Not determined
	Colour		white.
	Odour		mild.
	Odour threshold		Not available
	Melting point		Not applicable
	Freezing point		Not available
	Boiling point		100 °C
	Flammability (solid, gas)	Not applicable
	Explosive limits		Not applicable
	Lower explosive limit (L	EL)	Not applicable



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Upper explosive limit (UEL)	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
pH	Not available
pH solution	Not available
Viscosity, kinematic (calculated value) (40 °C)	46153,846 mm²/s
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	23 hPa
Vapour pressure at 50 °C	Not available
Density	1,3 g/cm ³
Relative density	Not available
Relative vapour density at 20 °C	Not applicable
Solubility	Miscible with water.
Viscosity, dynamic	60000 mPa·s
Explosive properties	Product is not explosive
Particle size	Not available
Particle size distribution	Not available
Particle shape	Not available
Particle aspect ratio	Not available
Particle specific surface area	Not available

9.2. Data relevant with regard to physical hazard classes (supplemental)

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

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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)	Not classified		
Acute toxicity (dermal)	Not classified		

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Acute toxicity (inhalation)	Not classified
Tris[2-chloro-1-(chloromethyl)ethyl] pho	osphate (13674-87-8)
LD50 oral rat	> 2000 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 23700 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 5,22 mg/l (4 h, Rat, Inhalation)
melamine (108-78-1)	
LD50 oral rat	3161 – 3828 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 1000 mg/kg (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	> 5,19 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value,
	Inhalation (aerosol))
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Suspected of causing cancer.
Reproductive toxicity	Suspected of damaging fertility or the unborn child.
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
CP 678	
Viscosity, kinematic	46153,846 mm²/s

SECTION 12: Ecological informatio	n
12.1. Toxicity	
Ecology - general	Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short- term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Very toxic to aquatic life with long lasting effects.
Classification procedure (Hazardous to the aquatic environment, long-term (chronic))	Calculation method
Tris[2-chloro-1-(chloromethyl)ethyl] phosphate (1	3674-87-8)
LC50 - Fish [1]	1,1 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	3,8 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Flow- through system, Fresh water, Experimental value, GLP)
	4.5 mg// (OECD 201: Algo, Crowth Inhibition Tool, 72 h. Booudokirohnoriolla subconitate, Statio

ErC50 algae	4,5 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
melamine (108-78-1)	
LC50 - Fish [1]	> 3000 mg/l (96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental
	value, Nominal concentration)
EC50 - Crustacea [1]	200 mg/l (EPA OPP 72-2, 48 h, Daphnia magna, Static system, Fresh water, Experimental
	value, Locomotor effect)
EC50 96h - Algae [1]	325 mg/l (Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value,
	Nominal concentration)

12.2. Persistence and degradability

CP 678		
Persistence and degradability	No additional information available	



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Tris[2-chloro-1-(chloromethyl)ethyl] phos	phate (13674-87-8)		
Persistence and degradability Not readily biodegradable in water.			
melamine (108-78-1)			
melamine (108-78-1)			
melamine (108-78-1) Persistence and degradability	Not readily biodegradable in water.		

12.3. **Bioaccumulative potential**

CP 678				
Bioaccumulative potential	No additional information available			
Tris[2-chloro-1-(chloromethyl)ethyl] phosphate (1				
BCF - Fish [1]	0,3 – 3,3 (6 week(s), Cyprinus carpio, Literature study)			
BCF - Fish [2]	50 – 89 (720 h, Oryzias latipes, Static system, Literature study)			
Partition coefficient n-octanol/water (Log Kow)	3,69 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)			
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).			
melamine (108-78-1)				
BCF - Fish [1]	0,05 – 0,11 (72 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)			
Partition coefficient n-octanol/water (Log Kow)	-1,22 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 22 °C)			
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).			

12.4. Mobility in soil

CP 678	
Mobility in soil	No additional information available
Tris[2-chloro-1-(chloromethyl)ethyl] phosphate (1	
Partition coefficient n-octanol/water (Log Koc)	3,25 (log Koc, OECD 106: Adsorption/Desorption Using a Batch Equilibrium Method,
	Experimental value, GLP)
Ecology - soil	Low potential for mobility in soil.
melamine (108-78-1)	
Partition coefficient n-octanol/water (Log Koc)	1,51 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

SECTION 13: Disposal considerations

13.1. **Disposal methods**

Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	ΙΑΤΑ	RID	
14.1. UN number or ID num	nber			
UN 3077	UN 3077	UN 3077	UN 3077	
08/11/2021	EN (English)			7/9



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

ADR	IMDG	ΙΑΤΑ	RID
14.2. UN proper shipping nar	ne		
ENVIRONMENTALLY	ENVIRONMENTALLY	Environmentally hazardous	ENVIRONMENTALLY
HAZARDOUS SUBSTANCE,	HAZARDOUS SUBSTANCE,	substance, solid, n.o.s. (tris[2-	HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (tris[2-chloro-1-	SOLID, N.O.S. (tris[2-chloro-1-	chloro-1-(chloromethyl)ethyl]	SOLID, N.O.S. (tris[2-chloro-1-
(chloromethyl)ethyl] phosphate) Transport document description	(chloromethyl)ethyl] phosphate)	phosphate)	(chloromethyl)ethyl] phosphate)
UN 3077 ENVIRONMENTALLY	UN 3077 ENVIRONMENTALLY	UN 3077 Environmentally	UN 3077 ENVIRONMENTALLY
HAZARDOUS SUBSTANCE,	HAZARDOUS SUBSTANCE,	hazardous substance, solid,	HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (tris[2-chloro-1- (chloromethyl)ethyl] phosphate),	SOLID, N.O.S. (tris[2-chloro-1- (chloromethyl)ethyl] phosphate),	n.o.s. (tris[2-chloro-1- (chloromethyl)ethyl] phosphate),	SOLID, N.O.S. (tris[2-chloro-1- (chloromethyl)ethyl] phosphate)
9, III, (-)	9, III, MARINE POLLUTANT	9, III	9, III
14.3. Transport hazard class	(es)		
9	9	9	9
14.4. Packing group			· · ·
14.5. Environmental hazards		•	
Dangerous for the environment:	Dangerous for the environment:	Dangerous for the environment:	Dangerous for the environment
Yes	Yes	Yes	Yes
No supplementary information avail	Marine pollutant: Yes		
4.6. Special precautions for u			
Overland transport			
Classification code (ADR)	М7		
Special provisions (ADR)	274, 335, 375, 6	801	
Limited quantities (ADR)	5kg		
Packing instructions (ADR)	0	202 B001	
	P002, IBC08, LF MP10	-02, R001	
Mixed packing provisions (ADR)	-		
Transport category (ADR)	3	•	
Orange plates	<u>90</u>		
	3077		
Tunnel restriction code (ADR)	-		
Transport by sea			
Special provisions (IMDG)	274, 335, 966, 9	067. 969	
Limited quantities (IMDG)	5 kg	,	
Packing instructions (IMDG)	LP02, P002		
EmS-No. (Fire)	F-A		
EmS-No. (Spillage)	S-F		
Stowage category (IMDG)	A		
Stowage and handling (IMDG)	SW23		
, ,			
Air transport			
PCA packing instructions (IATA)	956		
PCA max net quantity (IATA)	400kg		



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CAO packing instructions (IATA)	956	
Special provisions (IATA)	A97, A158, A179, A197, A215	
Rail transport		
•	274 225 275 601	
Special provisions (RID)	274, 335, 375, 601	
Limited quantities (RID)	5kg	
Packing instructions (RID)	P002, IBC08, LP02, R001	
14.7. Maritime transport in bulk acco	rding to IMO instruments	
Not applicable		

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information			
SDS Major/Minor	None		
Issue date	01/10/2021		
Revision date	01/10/2021		
Supersedes	07/10/2019		
Section	Changed item	Change	Comments
1.1	Name	Modified	
3	Composition/information on ingredients	Modified	

Full text of H-statements:		
H303	May be harmful if swallowed	
H351	Suspected of causing cancer	
H361	Suspected of damaging fertility or the unborn child	
H401	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.