

# CF-M AS 420 SA

Safety information for 2-Component-products

Date of issue: 22/01/2018

Revision date: 22/01/2018

Version: 1.0

## SECTION 1: Kit identification

### 1.1 Product identifier

Product name	CF-M AS 420 SA
Product code	BU Fire Protection

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

Hilti (South Africa) (Pty) Ltd.  
2 Tugela Lane, Waterfall Logistics Precinct  
Corner Bridal Veil Road and R101 | Jukskei View | 2090  
P.O. Box 5588 Halfway House  
1685 Midrand - South Africa  
T +2711 237300 - F +2711 2373111  
[Customercare.za@hilti.com](mailto:Customercare.za@hilti.com)

## SECTION 2: General information

Storage Storage temperature: 16-32°C / 60-90°F

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

## SECTION 3:

### 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)



GHS04

GHS07

GHS08

Signal word (GHS-UN)

Danger

Hazard statements (GHS-UN)

H280 - Contains gas under pressure; may explode if heated.  
H303 - May be harmful if swallowed.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 - May cause respiratory irritation.  
H351 - Suspected of causing cancer.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, hot surfaces, open flames, sparks. No smoking.  
P251 - Do not pierce or burn, even after use.  
P260 - Do not breathe vapours, spray, mist, gas, dust, fume.  
P280 - Wear Gloves, Safety glasses, Protective clothing.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Precautionary statements (GHS-UN)

# CF-M AS 420 SA

Safety information for 2-Component-products

## Additional information



Name	General description	Quantity	Unit	Classification according to the United Nations GHS
CF-M AS 420 SA, A		1	pcs	Press. Gas (Comp.), H280 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
CF-M AS 420 SA, B		1	pcs	Press. Gas (Comp.), H280 Acute Tox. 5 (Oral), H303 Skin Irrit. 2, H315 Eye Irrit. 2A, H319

## SECTION 4: General advice

General advice

For professional users only

## SECTION 5: Safe handling advice

General measures

Avoid contact with skin and eyes  
Do not handle until all safety precautions have been read and understood.  
No flames, no sparks. Eliminate all sources of ignition

Storage conditions

Protect from sunlight.  
Store in a well-ventilated place.  
Do not expose to temperatures exceeding 50 °C/ 122 °F.

Precautions for safe handling

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear personal protective equipment  
Do not breathe vapours, gas, spray.  
Use only outdoors or in a well-ventilated area.  
Avoid contact with skin and eyes

Methods for cleaning up

Take up liquid spill into absorbent material  
Notify authorities if product enters sewers or public waters

Incompatible materials

Heat sources  
Direct sunlight

## SECTION 6: First aid measures

First-aid measures after eye contact

Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Get medical advice/attention if you feel unwell.

First-aid measures after ingestion

Rinse mouth.  
Do not induce vomiting  
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.  
Call a poison center or a doctor if you feel unwell

# CF-M AS 420 SA

## Safety information for 2-Component-products

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First-aid measures after skin contact	Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
Symptoms/effects after eye contact	Causes serious eye irritation.
Symptoms/effects after inhalation	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	Causes skin irritation. May cause an allergic skin reaction.
Other medical advice or treatment	Treat symptomatically

### 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
Hazardous decomposition products in case of fire	Toxic fumes may be released

### SECTION 8: Other information

No data available

# CF-M AS 420 SA, B

## Safety Data Sheet

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

Date of issue: 22/01/2018

Version: 1.0

Revision date: 31/01/2018

Supersedes: 31/01/2018

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

#### 1.1. Product identifier

Product form	Mixture
Product name	CF-M AS 420 SA, B
Product code	BU Fire Protection
Product group	Trade product

#### 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 (South Africa) (Pty) Ltd.  
2 Tugela Lane, Waterfall Logistics Precinct  
Corner Bridal Veil Road and R101 | Jukskei View | 2090  
P.O. Box 5588 Halfway House  
1685 Midrand - South Africa  
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[Customercare.za@hilti.com](mailto:Customercare.za@hilti.com)

#### Supplier

Hilti (South Africa) (Pty) Ltd.  
2 Tugela Lane, Waterfall Logistics Precinct  
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2090  
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#### Department issuing data specification sheet

Hilti AG  
Feldkircherstraße 100  
9494 Schaan - Liechtenstein  
T +423 234 2111  
[chemicals.hse@hilti.com](mailto:chemicals.hse@hilti.com)

#### 1.4. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +2711 237300
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Press. Gas (Comp.)	H280
Acute Tox. 5 (Oral)	H303
Skin Irrit. 2	H315
Eye Irrit. 2A	H319

Full text of hazard classes and H-statements : see section 16

# CF-M AS 420 SA, B

## Safety Data Sheet

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

### 2.2. Label elements

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

Hazard pictograms (GHS-UN)



GHS04

GHS07

Signal word (GHS-UN)

Warning

Hazardous ingredients

tris(2-chloro-1-methylethyl) phosphate; bis(2-dimethylaminoethyl)(methyl)amine

Hazard statements (GHS-UN)

H280 - Contains gas under pressure; may explode if heated.  
 H303 - May be harmful if swallowed  
 H315 - Causes skin irritation.  
 H319 - Causes serious eye irritation.

Precautionary statements (GHS-UN)

P202 - Do not handle until all safety precautions have been read and understood.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P251 - Do not pierce or burn, even after use.  
 P260 - Do not breathe gas, mist, spray, vapours.  
 P280 - Wear protective gloves, Safety glasses, Protective clothing.  
 P308+P313 - IF exposed or concerned: Get medical advice, medical attention.  
 P410+P403 - Protect from sunlight. Store in a well-ventilated place.

### 2.3. Other hazards

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
tris(2-chloro-1-methylethyl) phosphate	(CAS-No.) 13674-84-5	29 - 39	Acute Tox. 4 (Oral), H302
1,1,1,2-tetrafluoroethane	(CAS-No.) 811-97-2	10 - 19	Pyr. Gas Not classified Aquatic Acute Not classified
nitrogen, compressed	(CAS-No.) 7727-37-9	5 - 9	Not classified
diethylene glycol	(CAS-No.) 111-46-6	1 - 4	Flam. Liq. Not classified Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Aquatic Acute Not classified
bis(2-dimethylaminoethyl)(methyl)amine	(CAS-No.) 3030-47-5	1 - 2,9	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

Call a poison center or a doctor if you feel unwell.

# CF-M AS 420 SA, B

## Safety Data Sheet

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

First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
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/effects after skin contact	Causes skin irritation.
Symptoms/effects after eye contact	Causes serious eye irritation.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.
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### 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.
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## 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 gas, vapours, spray.
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#### 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".
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### 6.2. Environmental precautions

No additional information available

### 6.3. Methods and material for containment and cleaning up

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 gas, spray, vapours. Wear personal protective equipment.
Hygiene measures	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.



# CF-M AS 420 SA, B

## Safety Data Sheet

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

Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	200 °C estimated
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	1,2
Solubility	No data available
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

### 9.2. Other information

VOC content	11,4 g/l calculated
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## 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)	Oral: May be harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified



# CF-M AS 420 SA, B

## Safety Data Sheet

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

<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
LD50 oral rat	1150 - 1750 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value; 1011-1824 mg/kg bodyweight; Rat; Experimental value)
LD50 oral	1150 - 1750
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
<b>diethylene glycol (111-46-6)</b>	
LD50 oral rat	19600 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
LD50 dermal rabbit	11890 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 4,6 mg/l air (Other, 4 h, Rat, Weight of evidence)
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Not classified
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

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
LC50 fish 1	98 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1	65 - 335 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	56,2 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	73 mg/l (96 h; Selenastrum capricornutum; Growth rate)
<b>diethylene glycol (111-46-6)</b>	
LC50 fish 1	> 5000 ppm (24 h, Carassius auratus)
EC50 Daphnia 1	> 10000 mg/l (24 h, Daphnia magna)
LC50 fish 2	75200 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value)
EC50 Daphnia 2	> 10000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)

### 12.2. Persistence and degradability

<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
<b>diethylene glycol (111-46-6)</b>	
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.
Biochemical oxygen demand (BOD)	0,02 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1,51 g O <sub>2</sub> /g substance
ThOD	1,51 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0,015

### 12.3. Bioaccumulative potential

<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
BCF fish 1	0,8 - 4,6 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	2,59 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

# CF-M AS 420 SA, B

## Safety Data Sheet

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

diethylene glycol (111-46-6)	
BCF fish 1	100 (Other, 3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)
Log Pow	-1,98 (Calculated, Other)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
Log Pow	See section 12.1 on ecotoxicology
diethylene glycol (111-46-6)	
Surface tension	0,0485 N/m
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology
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. Waste treatment methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	Ship returnable containers according with supplier's recommendations, All residual product should be removed from containers before disposal.

## SECTION 14: Transport information

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

ADR	IMDG	IATA	RID
14.1. UN number			
Not applicable	3500	3500	Not applicable
14.2. UN proper shipping name			
Not applicable	CHEMICAL UNDER PRESSURE, N.O.S.	Chemical under pressure, n.o.s.	Not applicable
Transport document description			
	UN 3500 CHEMICAL UNDER PRESSURE, N.O.S., 2.2		
14.3. Transport hazard class(es)			
Not applicable	2.2	2.2	Not applicable
Not applicable			Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

# CF-M AS 420 SA, B

## Safety Data Sheet

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

ADR	IMDG	IATA	RID
	Marine pollutant : No		
No supplementary information available			

### 14.6. Special precautions for user

#### - Overland transport

#### - Transport by sea

Special provisions (IMDG)	274, 362
Limited quantities (IMDG)	0
Packing instructions (IMDG)	P206
EmS-No. (Fire)	F-C
EmS-No. (Spillage)	S-V
Stowage category (IMDG)	B

#### - Air transport

PCA packing instructions (IATA)	218
PCA max net quantity (IATA)	75kg
CAO packing instructions (IATA)	218
Special provisions (IATA)	A187

#### - Rail transport

Carriage prohibited (RID)	No
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### 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

SDS Major/Minor	None
Date of issue	22/01/2018
Revision date	31/01/2018
Supersedes	31/01/2018

Full text of H-statements:

H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H303	May be harmful if swallowed
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

SDS\_UN\_Hilti



# CF-M AS 420 SA, B

## Safety Data Sheet

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

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*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*

# CF-M AS 420 SA, A

## Safety Data Sheet

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

Date of issue: 22/01/2018

Version: 1.0

Revision date: 22/01/2018

Supersedes: 22/01/2018

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

#### 1.1. Product identifier

Product form	Mixture
Product name	CF-M AS 420 SA, A
Product code	BU Fire Protection
Product group	Trade product

#### 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 (South Africa) (Pty) Ltd.  
2 Tugela Lane, Waterfall Logistics Precinct  
Corner Bridal Veil Road and R101 | Jukskei View | 2090  
P.O. Box 5588 Halfway House  
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[Customercare.za@hilti.com](mailto:Customercare.za@hilti.com)

#### Supplier

Hilti (South Africa) (Pty) Ltd.  
2 Tugela Lane, Waterfall Logistics Precinct  
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#### Department issuing data specification sheet

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Feldkircherstraße 100  
9494 Schaan - Liechtenstein  
T +423 234 2111  
[chemicals.hse@hilti.com](mailto:chemicals.hse@hilti.com)

#### 1.4. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +2711 237300
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Press. Gas (Comp.)	H280
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H335
STOT RE 2	H373

Full text of hazard classes and H-statements : see section 16

# CF-M AS 420 SA, A

## Safety Data Sheet

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

### 2.2. Label elements

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

Hazard pictograms (GHS-UN)



Signal word (GHS-UN)

Danger

Hazardous ingredients

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate; 4,4'-diphenylmethanediisocyanate, isomeres and homologues

Hazard statements (GHS-UN)

H280 - Contains gas under pressure; may explode if heated.  
 H315 - Causes skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H319 - Causes serious eye irritation.  
 H332 - Harmful if inhaled.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation.  
 H351 - Suspected of causing cancer.  
 H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS-UN)

P202 - Do not handle until all safety precautions have been read and understood.  
 P251 - Do not pierce or burn, even after use.  
 P260 - Do not breathe vapours, mist, spray, dust, fume, gas.  
 P280 - Wear protective gloves.  
 P308+P313 - IF exposed or concerned: Get medical advice, medical attention.  
 P410+P403 - Protect from sunlight. Store in a well-ventilated place.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 2.3. Other hazards

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
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8	30 - 60	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
4,4'-diphenylmethanediisocyanate, isomeres and homologues	(CAS-No.) 9016-87-9	30 - 60	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
1,1,1,2-tetrafluoroethane	(CAS-No.) 811-97-2	5 - 10	Pyr. Gas Not classified Aquatic Acute Not classified
nitrogen, compressed	(CAS-No.) 7727-37-9	5 - 10	Not classified

# CF-M AS 420 SA, A

## Safety Data Sheet

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

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	IF exposed or concerned: Get medical advice/attention. 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. Call a poison center or a doctor if you feel unwell.
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.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	Eye irritation.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.
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#### 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.
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### 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. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
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##### 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".
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#### 6.2. Environmental precautions

Avoid release to the environment.





# CF-M AS 420 SA, A

## Safety Data Sheet

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

### 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
Appearance	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container.
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	208 °C Boiling point of MDI
Flash point	199 °C Flash point of MDI
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	1,2
Solubility	No data available
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

### 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

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

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### 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
Acute toxicity (inhalation)	Inhalation:dust,mist: Harmful if inhaled.

ATE CLP (dust,mist)	1,5 mg/l/4h
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#### 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)

LD50 oral rat	> 2000 mg/kg
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#### 4,4'-diphenylmethanediisocyanate, isomers and homologues (9016-87-9)

LD50 oral rat	> 10000 mg/kg (Rat; Literature study)
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LD50 dermal rabbit	> 5000 mg/kg (Rabbit; Literature study)
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Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Suspected of causing cancer.
Reproductive toxicity	Not classified
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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Acute aquatic toxicity	Not classified
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Chronic aquatic toxicity	Not classified
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#### 4,4'-diphenylmethanediisocyanate, isomers and homologues (9016-87-9)

LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
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Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
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### 12.2. Persistence and degradability

#### 4,4'-diphenylmethanediisocyanate, isomers and homologues (9016-87-9)

Persistence and degradability	Not readily biodegradable in water. Hydrolysis in water. No (test)data on mobility of the substance available.
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### 12.3. Bioaccumulative potential

#### 4,4'-diphenylmethanediisocyanate, isomers and homologues (9016-87-9)

BCF fish 1	1 (Pisces)
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Bioaccumulative potential	Not bioaccumulative.
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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone	Not classified
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.
Product/Packaging disposal recommendations	Ship returnable containers according with supplier's recommendations, All residual product should be removed from containers before disposal.

## SECTION 14: Transport information

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

ADR	IMDG	IATA	RID
<b>14.1. UN number</b>			
Not applicable	3500	3500	Not applicable
<b>14.2. UN proper shipping name</b>			
Not applicable	CHEMICAL UNDER PRESSURE, N.O.S.	Chemical under pressure, n.o.s.	Not applicable
<b>Transport document description</b>			
	UN 3500 CHEMICAL UNDER PRESSURE, N.O.S., 2.2		
<b>14.3. Transport hazard class(es)</b>			
Not applicable	2.2	2.2	Not applicable
Not applicable			Not applicable
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available			

### 14.6. Special precautions for user

- Overland transport



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### - Transport by sea

Special provisions (IMDG)	274, 362
Limited quantities (IMDG)	0
Packing instructions (IMDG)	P206
EmS-No. (Fire)	F-C
EmS-No. (Spillage)	S-V
Stowage category (IMDG)	B

### - Air transport

PCA packing instructions (IATA)	218
PCA max net quantity (IATA)	75kg
CAO packing instructions (IATA)	218
Special provisions (IATA)	A187

### - Rail transport

Carriage prohibited (RID)	No
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## 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

SDS Major/Minor	None
Date of issue	22/01/2018
Revision date	22/01/2018
Supersedes	22/01/2018

Full text of H-statements:

H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

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*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*