SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

FILLER CARTRIDGE

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

1.1. Product identifier

Product name : FILLER CARTRIDGE
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Filler

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

TEC7*
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
🖷 +32 14 85 97 38
info@tec7.be
*TEC7 is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
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info@novatech.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Supplemental information

EUH208 Contains: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
quartz (SiO2)	14808-60-7 238-878-4	1%<C<3.5%		(2)	Constituent	

ethanediol 01-2119456816-28	107-21-1 203-473-3	1%<C<2.5%	Acute Tox. 4; H302 STOT RE 2; H373	(1)(2)(6)(10)	Constituent	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) 01-2120764691-48	55965-84-9	0.00015%<C<0.0015%	Acute Tox. 2; H330 Acute Tox. 2; H310 Acute Tox. 3; H301 Skin Sens. 1A; H317 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 Skin Irrit. 2; H315: 0,06% ≤C<0.6%, (CLP Annex VI (ATP 0)) Eye Dam. 1; H318: C≥0,6%, (CLP Annex VI (ATP 13)) Skin Corr. 1B; H314: C≥0,6%, (CLP Annex VI (ATP 0)) Eye Irrit. 2; H319: 0,06% ≤C<0,6%, (CLP Annex VI (ATP 0)) Skin Sens. 1; H317: C≥0,0015%, (CLP Annex VI (ATP 0))	(1)(2)(10)	Constituent	M: 100 (Acute, CLP Annex VI (ATP 13)) M: 100 (Chronic, CLP Annex VI (ATP 13))

(1) For H- and EUH-statements in full: see section 16
(2) Substance with a Community workplace exposure limit
(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:
Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:
Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:
If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

After eye contact:
Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

After ingestion:
Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:
No effects known.

After skin contact:
No effects known.

After eye contact:
No effects known.

After ingestion:
No effects known.

4.2.2 Delayed symptoms
No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:
Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO_2 extinguisher.

Major fire: Class B foam (alcohol-resistant), Water spray if puddle cannot expand.

5.1.2 Unsuitable extinguishing media:
Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product.

6.3. Methods and material for containment and cleaning up

Cover the solid spill with inert absorbent material. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: 5 °C - 35 °C. Meet the legal requirements. Keep container in a well-ventilated place. Keep out of direct sunlight. Keep only in the original container.

7.2.2 Keep away from:

Heat sources.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Ethylene glycol	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	52 mg/m³
	Short time value (Indicative occupational exposure limit value)	40 ppm
	Short time value (Indicative occupational exposure limit value)	104 mg/m³
Respirable crystalline silica dust	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	0.1 mg/m³ (2)

(2): Respirable fraction

Belgium

Ethylèneglycol (en aérosol)	Time-weighted average exposure limit 8 h	20 ppm (M)
	Time-weighted average exposure limit 8 h	52 mg/m³ (M)
	Short time value	40 ppm (M)
	Short time value	104 mg/m³ (M)
Silices cristallines : quartz (poussières alvéolaires)	Time-weighted average exposure limit 8 h	0.1 mg/m³

La mention “M” indique que lors d’une exposition supérieure à la valeur limite, des irritations apparaissent ou un danger d’intoxication aiguë existe. Le procédé de travail doit être conçu de telle façon que l’exposition ne dépasse jamais la valeur limite. Lors des mesurages, la période d’échantillonnage doit être aussi courte que possible afin de pouvoir effectuer des mesurages fiables. Le résultat des mesurages est calculé en fonction de la période d’échantillonnage.

The Netherlands

Ethaan-1,2-diol (damp)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	52 mg/m³
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	104 mg/m³
Ethaan-1,2-diol (druppels)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	3.9 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	10 mg/m³
Respirabel kristallijn silicastof - kwarts	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	0.03 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	0.075 mg/m³

France

Ethylèneglycol (vapeur)	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	20 ppm
	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	52 mg/m³
	Short time value (VRI: Valeur réglementaire indicative)	40 ppm
	Short time value (VRI: Valeur réglementaire indicative)	104 mg/m³
Silices cristallines : cristobalite, quartz, tridymite	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	0.1 mg/m³

Germany

Ethandiol	Time-weighted average exposure limit 8 h (TRGS 900)	10 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	26 mg/m³

Austria

5-Chlor-2-methyl-2,3- dihydroisothiazol-3-on und 2-Methyl-2,3-di-hydroisothiazol- 3-on (Gemisch im Verhältnis 3:1)	Tagesmittelwert (MAK)	0.05 mg/m³
Ethylenglykol	Tagesmittelwert (MAK)	10 ppm
	Tagesmittelwert (MAK)	26 mg/m³
	Kurzzeitwert 5(Mow) 8x (MAK)	20 ppm
	Kurzzeitwert 5(Mow) 8x (MAK)	52 mg/m³
Quarzfeinstaub(alveolengängiges kristallines Siliziumdioxid)	Tagesmittelwert (MAK)	0.05 mg/m³

UK

Ethane-1,2-diol particulate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m³
Ethane-1,2-diol vapour	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	20 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	52 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	40 ppm
	Short time value (Workplace exposure limit (EH40/2005))	104 mg/m³
Silica, respirable crystalline (respirable fraction)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.1 mg/m³

USA (TLV-ACGIH)

Ethylene glycol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	25 ppm (V)
	Short time value (TLV - Adopted Value)	50 ppm (V)
	Short time value (TLV - Adopted Value)	10 mg/m³ (I,H)
Silica, crystalline - α-quartz and cristobalite	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.025 mg/m³ (R)

(V): Vapor fraction
(I,H): Inhalable fraction, Aerosol only
(R): Respirable fraction

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
1,2-ethanediol	NIOSH	5500
Crystalline Silica	OSHA	ID 142
Ethylene Glycol	NIOSH	5523
Ethylene Glycol	OSHA	2024
Quartz (silica, crystalline, by XRD)	NIOSH	7500
quartz	NIOSH	7601
quartz	NIOSH	7602
Silica, Quartz in Coal Dust (Silica in coal mine dust)	NIOSH	7603

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

ethanediol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	35 mg/m³	
	Long-term systemic effects dermal	106 mg/kg bw/day	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.02 mg/m³	
	Acute local effects inhalation	0.04 mg/m³	

DNEL/DMEL - General population

ethanediol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	7 mg/m³	
	Long-term systemic effects dermal	53 mg/kg bw/day	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.02 mg/m³	
	Acute local effects inhalation	0.04 mg/m³	
	Long-term systemic effects oral	0.09 mg/kg bw/day	
	Acute systemic effects oral	0.11 mg/kg bw/day	

PNEC

ethanediol

Compartments	Value	Remark
Fresh water	10 mg/l	
Marine water	1 mg/l	
Fresh water (intermittent releases)	10 mg/l	
Marine water (intermittent releases)	10 mg/l	
STP	199.5 mg/l	
Fresh water sediment	37 mg/kg sediment dw	
Marine water sediment	3.7 mg/kg sediment dw	
Soil	1.53 mg/kg soil dw	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Compartments	Value	Remark
Fresh water	3.39 µg/l	
Fresh water (intermittent releases)	3.39 µg/l	
Marine water	3.39 µg/l	
Marine water (intermittent releases)	3.39 µg/l	
STP	0.23 mg/l	
Fresh water sediment	0.027 mg/kg sediment dw	
Marine water sediment	0.027 mg/kg sediment dw	
Soil	0.01 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Remark
nitrile rubber	Good resistance

c) Eye protection:

Eye protection not required in normal conditions.

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Paste
Viscosity	Thixotropic
Odour	Characteristic odour
Odour threshold	No data available in the literature
Colour	White
Particle size	Not applicable (liquid)
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	100 °C
Relative vapour density	No data available in the literature
Vapour pressure	No data available in the literature
Solubility	Water ; miscible
Relative density	0.51 ; 20 °C
Absolute density	505 kg/m³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	200 °C
pH	7 ; 20 °C

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard. Neutral reaction.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Test results

Acute toxicity

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	BASF-internal standards	7712 mg/kg bw		Rat (male / female)	Experimental value	Aqueous solution
Oral			category 4			Annex VI	
Dermal	LD50	Teratogenicity study	> 3500 mg/kg bw		Mouse (male / female)	Experimental value	
Inhalation (aerosol)	LC50	Teratogenicity study	> 2.5 mg/l air	6 h	Rat (male / female)	Experimental value	

In the light of practical experience, the classification for this substance is more stringent than the one based on test results of the used test organisms

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	66 mg/kg bw		Rat (male / female)	Experimental value	Calculated by reference to active substance
Dermal	LD50	OECD 402	> 141 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (dust)	LC50	OECD 403	0.17 mg/l air	4 h	Rat (male / female)	Experimental value	Calculated by reference to active substance

Conclusion

Not classified for acute toxicity

Corrosion/irritation

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

quartz (SiO2)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating					Literature study	
Skin	Not irritating					Literature study	

ethanediol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	BASF-internal standards	24 h	1; 24; 48; 72 hrs; 8 days	Rabbit	Experimental value	
Skin	Not irritating	BASF-internal standards	20 h	8 days	Rabbit	Experimental value	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405		1; 24; 48; 72 hrs; 7; 14 days	Rabbit	Experimental value	Single treatment with rinsing
Skin	Corrosive	OECD 404	4 h		Rabbit	Experimental value	Aqueous solution

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Guinea pig maximisation test			Guinea pig (female)	Experimental value	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406			Guinea pig (male / female)	Experimental value	

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOEL	Equivalent to OECD 408	150 mg/kg bw/day	Kidney	No effect	16 weeks (daily)	Rat (male)	Experimental value
Oral (diet)	Dose level	Equivalent to OECD 408	500 mg/kg bw/day	Kidney	Histopathological changes	16 weeks (daily)	Rat (male)	Experimental value
Dermal	NOAEL	OECD 410	2200 mg/kg bw - 4400 mg/kg bw		No effect	4 weeks (daily, 5 days / week)	Dog (male)	Experimental value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	OECD 409	22 mg/kg bw/day		No adverse systemic effects	13 week(s)	Dog (male / female)	Experimental value
Dermal	NOAEL systemic effects	EPA OPP 82-3	2.625 mg/kg bw/day		No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Dermal	NOAEC local effects	EPA OPP 82-3	0.105 mg/kg bw/day		No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (aerosol)	NOAEC	OECD 412	0.11 mg/l air		No effect	4 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Result	Method	Test substrate	Effect	Value determination	Remark
Negative	OECD 471	Bacteria (S. typhimurium and E. coli)	No effect	Experimental value	

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Result	Method	Test substrate	Effect	Value determination	Remark
Positive with metabolic activation, positive without metabolic activation	EPA OPP 84-2	Bacteria (S. typhimurium and E. coli)		Experimental value	Aqueous solution
Positive with metabolic activation, positive without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	Aqueous solution

Mutagenicity (in vivo)

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (diet))	Chromosome aberration assay		Rat (male / female)		Experimental value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	EPA OPP 84-2	2 dose(s)/24-hour interval	Mouse (male / female)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (diet)	NOAEL	Carcinogenic toxicity study	1000 mg/kg bw/day	24 month(s)	Rat (male / female)	No carcinogenic effect		Experimental value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	NOEL	OECD 453	300 ppm	24 month(s)	Rat (male / female)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement is based on the relevant ingredients

ethanediol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (aerosol))	NOAEC	Developmental toxicity study	150 mg/m³ air	10 days (6h / day)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (aerosol))	NOAEC	Developmental toxicity study	1000 mg/m³ air	10 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility (Oral (diet))	NOAEL	3 generation study	> 1000 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	EPA OPP 83-3	≥ 19.6 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	LOAEL	EPA OPP 83-3	28 mg/kg bw/day	10 days (gestation, daily)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL	OECD 416	30 ppm	10 week(s)	Rat (male / female)	No effect		

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

FILLER CARTRIDGE

No (test)data on the mixture available

Chronic effects from short and long-term exposure

FILLER CARTRIDGE

Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

FILLER CARTRIDGE

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

ethanediol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA 600/4-90/027	72860 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	OECD 202	> 100 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	EPA 600/9-78-018	6500 mg/l - 13000 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC	EPA 600/4-90/027	15380 mg/l	7 day(s)	Pimephales promelas	Semi-static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	EPA 600/4-90/027	8590 mg/l	7 day(s)	Ceriodaphnia sp.	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC20	ISO 8192	> 1995 mg/l	30 minutes	Activated sludge	Static system	Fresh water	Read-across

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity crustacea	EC50		0.007 mg/l	48 h	Acartia tonsa		Salt water	Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.49 µg/l	48 h	Skeletonema costatum	Static system	Salt water	Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC50	OECD 209	4.5 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

ethanediol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301A	90 % - 100 %	10 day(s)	Experimental value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	47.6 % - 55.8 %; GLP	28 day(s)	Experimental value

Conclusion

Water

Contains traces of a non-biodegradable component

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

quartz (SiO_2)

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

ethanediol

Log Kow

Method	Remark	Value	Temperature	Value determination
		-1.36		Calculated

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	41 - 54; Fresh weight	28 day(s)	Lepomis macrochirus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.75	24 °C	

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

ethanediol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v1.66	0	Calculated value

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

(log) Koc

Parameter	Method	Value	Value determination
Koc	OECD 106	6.4 - 10	Experimental value
log Koc		0.81 - 1	Calculated value

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

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Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Groundwater

Groundwater pollutant

ethanediol

Groundwater

Groundwater pollutant

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 04 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Dispose of the small quantities as household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

No data available

SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
2.24 %	
11.3 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC, 2004/37/EC and amendments)

ethanediol

Product name	Skin resorption
Ethylene glycol	Skin

Directive 2012/18/EU (Seveso III)

Not subject to registration according to Directive 2012/18/EU (Seveso III)

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· ethanediol	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
· reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

	(d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	

National legislation Belgium

FILLER CARTRIDGE

No data available

quartz (SiO2)

Additional classification	Silices cristallines : quartz (poussières alvéolaires); C; La mention “C” signifie que l’agent en question relève du champ d’application de l’arrêté royal du 2 décembre 1993 concernant la protection des travailleurs contre les risques liés à l’exposition à des agents cancérigènes et mutagènes et reprotoxiques au travail.
Agents cancérigènes, mutagènes et reprotoxiques (Code du bien-être au travail, Livre VI, titre 2)	silice cristalline alvéolaire; VI.2.3.; Liste non limitative de substances, mélanges et procédés visés à l’article VI.2-1, alinéa 3

ethanediol

Résorption peau	Ethylèneglycol (en aérosol); D; La mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air.

National legislation The Netherlands

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Waterbezwaarlijkheid	B (4); Algemene Beoordelingsmethodiek (ABM)

quartz (SiO2)

SZW - Lijst van kankerverwekkende stoffen	silica (respirabel stof, kristallijn); Listed in SZW-list of carcinogenic substances

ethanediol

Huidopname (wettelijk)	Ethaan-1,2-diol (damp); H

National legislation France

FILLER CARTRIDGE

No data available

ethanediol

Risque de pénétration percutanée	Ethylèneglycol (vapeur); Risque de pénétration percutanée

National legislation Germany

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WGK	1; Classification water polluting according to external literature source

quartz (SiO2)

TA-Luft	5.2.7.1.1/II

ethanediol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Ethandiol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	Ethandiol; H; Hautresorptiv

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

TA-Luft	5.2.5/I

National legislation Austria

FILLER CARTRIDGE

No data available

quartz (SiO2)

Krebserzeugend	Quarzfeinstaub(alveolengängiges kristallines Siliziumdioxid); III C

ethanediol

besondere Gefahr der Hautresorption	Ethylenglykol; H

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Gefahr der Sensibilisierung der Haut	5-Chlor-2-methyl-2,3- dihydroisothiazol-3-on und 2- Methyl-2,3-di-hydroisothiazol- 3-on (Gemisch im Verhältnis 3:1); Sh

National legislation United Kingdom

FILLER CARTRIDGE

No data available

quartz (SiO2)

Carcinogen	Silica, respirable crystalline (respirable fraction); Carc

ethanediol

Skin absorption	Ethane-1,2-diol particulate; Sk
	Ethane-1,2-diol vapour; Sk

Other relevant data

FILLER CARTRIDGE

No data available

quartz (SiO2)

IARC - classification	1; Silica dust, crystalline, in the form of quartz or cristobalite
TLV - Carcinogen	Silica, crystalline - α-quartz and cristobalite; A2

ethanediol

TLV - Carcinogen	Ethylene glycol; A4

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H373 May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH071 Corrosive to the respiratory tract.
EUH208 Contains a sensitising substance. May produce an allergic reaction.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEC/NOAEL	No Observed Adverse Effect Concentration/No Observed Adverse Effect Level
NOEC/NOEL	No Observed Effect Concentration/No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.