

## Flame-Ex

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

#### 1.1. Product identifier

Product name : Flame-Ex  
 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

Intumescent coating

##### 1.2.2 Uses advised against

No uses advised against

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier of the safety data sheet

Hevadex bv  
 Spinnerslaan 6  
 B-9160 Lokeren  
 ☎ +32 93 48 31 00  
 info@hevadex.be

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :  
 +32 475 73 85 46

### 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); 2-methylisothiazol-3(2H)-one. May produce an allergic reaction.  
 EUH210 Safety data sheet available on request.

#### 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 List No	Conc. (C)	Classification according to CLP	Note	Remark
titanium dioxide 01-2119489379-17	13463-67-7 236-675-5	C<10%		(2)	Constituent
melamine	108-78-1 203-615-4	C<15%		(2)	Constituent
pentaerythritol 01-2119473985-20	115-77-5 204-104-9	C<10%		(2)	Constituent
ethanediol 01-2119456816-28	107-21-1 203-473-3	C<5%	Acute Tox. 4; H302 STOT RE 2; H373	(1)(2)(6)(10)	Constituent
mineral fibers conform nota Q	926-099-9	C<5%		(2)	Constituent

(1) For H-statements in full: see heading 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

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Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

## 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 CO2 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

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide) and formation of small quantities of sulphur oxides.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

#### 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 heading 8.2

#### 6.1.2 Protective equipment for emergency responders

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

##### Suitable protective clothing

See heading 8.2

### 6.2. Environmental precautions

Contain released product, pump into suitable containers. Plug the leak, cut off the supply.

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

Solid spill: cover with absorbent material. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water.  
Wash clothing and equipment after handling.

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## 6.4. Reference to other sections

See heading 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 - 25 °C. Store in a cool area. Meet the legal requirements.

#### 7.2.2 Keep away from:

Heat sources.

#### 7.2.3 Suitable packaging material:

Plastics.

#### 7.2.4 Non suitable packaging material:

Metal.

### 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/m <sup>3</sup>
	Short time value (Indicative occupational exposure limit value)	40 ppm
	Short time value (Indicative occupational exposure limit value)	104 mg/m <sup>3</sup>

#### Belgium

Ethylèneglycol (en aérosol)	Time-weighted average exposure limit 8 h	20 ppm (M)
	Time-weighted average exposure limit 8 h	52 mg/m <sup>3</sup> (M)
	Short time value	40 ppm (M)
	Short time value	104 mg/m <sup>3</sup> (M)
Fibres (fibres cristallines synthétiques inorganiques)	Time-weighted average exposure limit 8 h	500000 fibers/m <sup>3</sup> (F)
Fibres (fibres amorphes synthétiques inorganique)	Time-weighted average exposure limit 8 h	1000000 fibers/m <sup>3</sup> (F)
Particules non classifiées autrement (fraction alvéolaire)	Time-weighted average exposure limit 8 h	3 mg/m <sup>3</sup>
Particules non classifiées autrement (fraction inhalable)	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>
Pentaérythritol	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>
Titane (dioxyde de)	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>

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.

La mention "F" signifie que l'exposition à l'agent en question se fait sous forme de fibres. Par fibre on entend toute particule d'une longueur supérieure à 5µm, d'un diamètre inférieur à 3 µm et dont le rapport longueur/diamètre est supérieur à 3. Par dérogation aux unités de concentration mentionnées (mg/m<sup>3</sup>) la concentration en fibres est exprimée en nombre de fibres par mètre cube

#### 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/m <sup>3</sup>
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	104 mg/m <sup>3</sup>
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/m <sup>3</sup>

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## 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/m <sup>3</sup>
	Short time value (VRI: Valeur réglementaire indicative)	40 ppm
	Short time value (VRI: Valeur réglementaire indicative)	104 mg/m <sup>3</sup>
Pentaérythritol	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m <sup>3</sup>
Poussières réputées sans effet spécifique, fraction alvéolaire	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	5 mg/m <sup>3</sup>
Poussières réputées sans effet spécifique	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	10 mg/m <sup>3</sup>
Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m <sup>3</sup>

## Germany

Allgemeiner Staubgrenzwert: Alveolengängige Fraktion	Time-weighted average exposure limit 8 h (TRGS 900)	1.25 mg/m <sup>3</sup>
Ethandiol	Time-weighted average exposure limit 8 h (TRGS 900)	10 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	26 mg/m <sup>3</sup>

## UK

Ethane-1,2-diol particulate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>
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/m <sup>3</sup>
	Short time value (Workplace exposure limit (EH40/2005))	40 ppm
	Short time value (Workplace exposure limit (EH40/2005))	104 mg/m <sup>3</sup>
Inhalable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>
MMMMF (Machine-made mineral fibre) (except for refraction ceramic fibres and special purpose fibres)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5 mg/m <sup>3</sup>
Pentaerythritol inhalable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>
	Short time value (Workplace exposure limit (EH40/2005))	20 mg/m <sup>3</sup>
Pentaerythritol respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>

## 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/m <sup>3</sup> (I,H)
Particulates (insoluble or poorly soluble) not otherwise specified	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	3 mg/m <sup>3</sup> (R)
Pentaerythritol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m <sup>3</sup>
Titanium dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m <sup>3</sup>

(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
Ethylene Glycol	NIOSH	5523
Ethylene Glycol	OSHA	2024

#### 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

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Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	35 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	106 mg/kg bw/day	

**DNEL/DMEL - General population**

ethanediol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	7 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	53 mg/kg bw/day	

**PNEC**

ethanediol

Compartments	Value	Remark
Fresh water	10 mg/l	
Marine water	1 mg/l	
Aqua (intermittent releases)	10 mg/l	
Fresh water sediment	37 mg/kg sediment dw	
Marine water sediment	3.7 mg/kg sediment dw	
STP	199.5 mg/l	
Soil	1.53 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. Measure the concentration in the air regularly. 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).

#### c) Eye protection:

Safety glasses (EN 166).

#### d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

### 8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical form	Paste
Odour	Mild odour
	Aromatic odour
Odour threshold	No data available (test not performed)
Colour	White
Particle size	Not applicable (mixture)
Explosion limits	No data available (test not performed)
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	7500 mPa.s
Kinematic viscosity	No data available (test not performed)
Melting point	No data available (test not performed)
Boiling point	No data available (test not performed)
Evaporation rate	No data available (test not performed)
Relative vapour density	No data available (test not performed)
Vapour pressure	No data available (test not performed)
Solubility	Water ; miscible
Relative density	No data available (test not performed)
Decomposition temperature	No data available (test not performed)
Auto-ignition temperature	No data available (test not performed)
Flash point	No data available (test not performed)
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available (test not performed)

### 9.2. Other information

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No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Heating increases the fire hazard.

### 10.2. Chemical stability

No data available.

### 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

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide) and formation of small quantities of sulphur oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### 11.1.1 Test results

#### Acute toxicity

Judgement is based on the relevant ingredients  
ethanediol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral			category 4			Annex VI	
Oral	LD50	BASF-internal standards	7712 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Developmental toxicity study	> 3500 mg/kg bw		Mouse (male / female)	Experimental value	
Inhalation (mist)	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

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

Judgement is based on the relevant ingredients  
ethanediol

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

#### 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

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	

#### Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

#### Specific target organ toxicity

Judgement is based on the relevant ingredients

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## 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		No effect	4 weeks (daily, 5 days / week)	Dog (male)	Experimental value

### Conclusion

Not classified for subchronic toxicity

### Mutagenicity (in vitro)

Judgement is based on the relevant ingredients

#### ethanediol

Result	Method	Test substrate	Effect	Value determination	Remark
Negative	OECD 471	Bacteria ( <i>S.typhimurium</i> )	No effect	Experimental value	

### Mutagenicity (in vivo)

Judgement is based on the relevant ingredients

#### ethanediol

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

### Conclusion

Not classified for mutagenic or genotoxic toxicity

### Carcinogenicity

Judgement is based on the relevant ingredients

#### ethanediol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEL	Carcinogenic toxicity study	1000 mg/kg bw/day	24 month(s)	Rat (male / female)			Experimental value

### Conclusion

Not classified for carcinogenicity

### Reproductive toxicity

Judgement is based on the relevant ingredients

#### ethanediol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Developmental toxicity study	150 mg/m <sup>3</sup> air	6 days (gestation, daily) - 15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility	NOAEL	3 generation study	> 1000 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

### Conclusion

Not classified for reprotoxic or developmental toxicity

### Chronic effects from short and long-term exposure

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Skin rash/inflammation.

## SECTION 12: Ecological information

### 12.1. Toxicity

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Judgement of the mixture is based on the relevant ingredients

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## 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			Experimental value; Growth rate
Long-term toxicity fish	NOEC	EPA 600/4-90/027	15380 mg/l	7 day(s)	Pimephales promelas			Experimental value
Long-term toxicity aquatic crustacea	NOEC	EPA 600/4-90/027	8590 mg/l	7 day(s)	Ceriodaphnia sp.		Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC20	ISO 8192	> 1995 mg/l	30 minutes	Activated sludge	Static system	Fresh water	Read-across
	EC5	DIN 38412-8	> 10000 mg/l	16 h	Pseudomonas putida			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

#### Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
SRC AOP v1.92	46.3 day(s)	500000 /cm <sup>3</sup>	Calculated value

## Conclusion

### Water

Contains non readily biodegradable component(s)

## 12.3. Bioaccumulative potential

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#### Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

### ethanediol

#### Log Kow

Method	Remark	Value	Temperature	Value determination
		-1.36		Calculated

## Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

## 12.4. Mobility in soil

### ethanediol

#### (log) Koc

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

#### Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.1327 Pa.m <sup>3</sup> /mol	SRC HENRYWIN v3.10	25 °C		Calculated value

#### Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Other	0.03 %		0 %	0 %	100 %	Calculated value

## Conclusion

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

## 12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

## 12.6. 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)

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## Ozone-depleting potential (ODP)

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

ethanediol

**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. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

#### 13.1.2 Disposal methods

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

#### 13.1.3 Packaging/Container

##### European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 02 (plastic packaging).

## 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
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#### 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
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#### 14.6. Special precautions for user

Special provisions	
Limited quantities	

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable, based on available data
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## 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
	No data available

ethanediol

Product name	Skin resorption
Ethylene glycol	Skin

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	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,

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development, 3.8 effects other than narcotic effects, 3.9 and 3.10;  
(c) hazard class 4.1;  
(d) hazard class 5.1.

— 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.  
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public.  
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

## National legislation Belgium

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No data available

### 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.
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## National legislation The Netherlands

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Waterbezwaarlijkheid	Z (1); Algemene Beoordelingsmethodiek (ABM)
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### ethanediol

Huidopname (wettelijk)	Ethaan-1,2-diol (damp); H
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## National legislation France

### Flame-Ex

No data available

### ethanediol

Risque de pénétration percutanée	Ethylèneglycol (vapeur); PP
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## National legislation Germany

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WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
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### 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

## National legislation United Kingdom

### Flame-Ex

No data available

### ethanediol

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

## Other relevant data

### Flame-Ex

No data available

### ethanediol

TLV - Carcinogen	Ethylene glycol; A4
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## 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

### ethanediol

A chemical safety assessment has been performed.

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## SECTION 16: Other information

### Full text of any H-statements referred to under heading 3:

H302 Harmful if swallowed.

H373 May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
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 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
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.

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