

# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

## NOVELEC-S

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

#### 1.1. Product identifier

Product name : NOVELEC-S  
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

Degreasing agent  
Detergent according to Regulation (EC) No 648/2004

##### 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

Novatio\*  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 25 76 40  
✉ +32 14 22 02 66  
info@novatio.be  
\*NOVATIO 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  
✉ +32 14 85 97 38  
info@tec7.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

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	category 3	H229: Pressurised container: May burst if heated.
Repr.	category 1B	H360FD: May damage fertility. May damage the unborn child.
STOT RE	category 2	H373: May cause damage to organs (central nervous system, liver) through prolonged or repeated exposure.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H335: May cause respiratory irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

#### 2.2. Label elements



Contains: 1-bromopropane.

Signal word Danger

##### H-statements

H229	Pressurised container: May burst if heated.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs (central nervous system, liver) through prolonged or repeated exposure.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.

## P-statements

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.  
P280 Wear protective gloves, protective clothing and eye protection/face protection.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.

## Supplemental information

EUH018 In use may form flammable/explosive vapour-air mixture.  
Restricted to professional users.  
> 30 % by mass of the contents are flammable

## 2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

## 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
1-bromopropane 01-2119519252-48	106-94-5 203-445-0	C≤70 %	Flam. Liq. 2; H225 Repr. 1B; H360FD STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT SE 3; H336	(1)(2)(10)(4)(11)	Constituent
carbon dioxide	124-38-9 204-696-9	C≤30 %	Press. Gas - Liquefied gas; H280	(1)(2)(1)	Propellant

- (1) For H-statements in full: see heading 16  
(2) Substance with a Community workplace exposure limit  
(4) Enumerated in candidate list of substances of very high concern (SVHC) for authorisation (Article 59 of Regulation (EC) No. 1907/2006)  
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006  
(11) Enumerated in Annex XIV of Regulation (EC) No. 1907/2006: list of substances subject to authorisation  
(I) Exempted from registration under REACH according to Annex IV (Regulation (EC) No 1907/2006)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General:

If you feel unwell, seek medical advice.

#### After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

#### After skin contact:

Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

#### After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

#### After ingestion:

Rinse mouth with water. Do not induce vomiting. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service if you feel unwell.

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

#### 4.2.1 Acute symptoms

##### After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Central nervous system depression. Headache. Nausea. Narcosis.

##### After skin contact:

Tingling/irritation of the skin.

##### After eye contact:

Irritation of the eye tissue.

##### After ingestion:

No effects known.

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Revision number: 0600

Product number: 44876

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## 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.

#### 5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting CO2 extinguisher, Water (water can be used to control jet flame), Foam.

Major fire: Water (water can be used to control jet flame), Foam.

### 5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (hydrogen bromide, carbon monoxide - carbon dioxide). Pressurised container: May burst if heated.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Protective goggles. Head/neck protection. Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

#### 6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing. Protective goggles. Head/neck protection.

Suitable protective clothing

See heading 8.2

### 6.2. Environmental precautions

Dam up the liquid spill.

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

Take up liquid spill into a non combustible material e.g.: sand/earth. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers.

Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 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

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe strict hygiene. Remove contaminated clothing immediately.

### 7.2. Conditions for safe storage, including any incompatibilities

#### 7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Store in a cool area. Keep out of direct sunlight. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Keep out of direct sunlight. Meet the legal requirements.

#### 7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents, (strong) acids.

#### 7.2.3 Suitable packaging material:

Aerosol.

#### 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.

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## 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

Carbon dioxide	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	5000 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	9000 mg/m <sup>3</sup>

##### Belgium

1-Bromopropane	Time-weighted average exposure limit 8 h	0.1 ppm
	Time-weighted average exposure limit 8 h	0.5 mg/m <sup>3</sup>
Carbone (dioxyde de)	Time-weighted average exposure limit 8 h	5000 ppm (A)
	Time-weighted average exposure limit 8 h	9131 mg/m <sup>3</sup> (A)
	Short time value	30000 ppm (A)
	Short time value	54784 mg/m <sup>3</sup> (A)

La mention "A" signifie que l'agent libère un gaz ou une vapeur qui n'ont en eux-mêmes aucun effet physiologique mais peuvent diminuer le taux d'oxygène dans l'air. Lorsque le taux d'oxygène descend en dessous de 17-18 % (vol/vol) le manque d'oxygène provoque des suffocations qu'aucun symptôme préalable n'annonce

##### The Netherlands

Kooldioxide	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	4919 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	9000 mg/m <sup>3</sup>

##### France

Carbone (dioxyde de)	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	5000 ppm
	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	9000 mg/m <sup>3</sup>

##### Germany

Kohlenstoffdioxid	Time-weighted average exposure limit 8 h (TRGS 900)	5000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	9100 mg/m <sup>3</sup>

##### UK

Carbon dioxide	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5000 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	9150 mg/m <sup>3</sup>
	Short time value (Workplace exposure limit (EH40/2005))	15000 ppm
	Short time value (Workplace exposure limit (EH40/2005))	27400 mg/m <sup>3</sup>

##### USA (TLV-ACGIH)

1-Bromopropane	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 ppm
Carbon dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5000 ppm
	Short time value (TLV - Adopted Value)	30000 ppm

##### 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-Bromopropane	NIOSH	1025
1-Bromopropane	OSHA	1017
1-Bromopropane	OSHA	2061

#### 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

##### 1-bromopropane

Effect level (DNEL/DMEL)	Type	Value	Remark
DMEL	Long-term systemic effects inhalation	0.029 mg/m <sup>3</sup>	
DNEL	Acute systemic effects inhalation	2416 mg/m <sup>3</sup>	
	Acute local effects inhalation	2416 mg/m <sup>3</sup>	

##### DNEL/DMEL - General population

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## 1-bromopropane

Effect level (DNEL/DMEL)	Type	Value	Remark
DMEL	Long-term systemic effects inhalation	0.014 mg/m <sup>3</sup>	
DNEL	Acute systemic effects inhalation	1208 mg/m <sup>3</sup>	
	Acute local effects inhalation	1208 mg/m <sup>3</sup>	

## PNEC

### 1-bromopropane

Compartments	Value	Remark
Fresh water	0.024 mg/l	
Marine water	0.002 mg/l	
STP	10 mg/l	
Fresh water sediment	0.249 mg/kg sediment dw	
Marine water sediment	0.025 mg/kg sediment dw	
Soil	0.036 mg/kg soil dw	
Oral	0.041 mg/kg food	

### 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

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

### 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:

Full face mask with filter type A at conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Thickness	Protection index
viton	> 480 minutes	0.7 mm	Class 6

#### c) Eye protection:

Protective goggles.

#### d) Skin protection:

Head/neck protection. Protective clothing.

### 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	Aerosol
Odour	Characteristic odour
Odour threshold	No data available
Colour	No data available on colour
Particle size	Not applicable
Explosion limits	No data available
Flammability	In use may form flammable/explosive vapour-air mixture.
Log Kow	Not applicable (mixture)
Dynamic viscosity	1 mPa.s ; 20 °C ; Liquid
Kinematic viscosity	1 mm <sup>2</sup> /s ; 20 °C ; Liquid
Melting point	-110 °C ; Liquid
Boiling point	-57 °C - 69 °C ; Liquid
Evaporation rate	No data available
Relative vapour density	> 1
Vapour pressure	4.84 hPa ; 20 °C
Solubility	Water ; insoluble
Relative density	1.3 ; Liquid
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	Not applicable
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

### 9.2. Other information

Absolute density	1304 kg/m <sup>3</sup> ; Liquid
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

#### Precautionary measures

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

### 10.5. Incompatible materials

Oxidizing agents, (strong) acids.

### 10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (hydrogen bromide, carbon monoxide - carbon dioxide).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### 11.1.1 Test results

#### Acute toxicity

##### NOVELEC-S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

##### 1-bromopropane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (vapours)	LC50	OECD 403	72.3 mg/l	4 h	Rat (male / female)	Experimental value	

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

##### NOVELEC-S

No (test)data on the mixture available

Classification is based on the relevant ingredients

##### 1-bromopropane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating			24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating		24 h	72 hours	Rabbit	Experimental value	
Skin	Irritating; category 2					Annex VI	

#### Conclusion

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

#### Respiratory or skin sensitisation

##### NOVELEC-S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

##### 1-bromopropane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406		24; 48 hours	Guinea pig (female)	Experimental value	

#### Conclusion

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Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

## Specific target organ toxicity

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No (test)data on the mixture available

Classification is based on the relevant ingredients

#### 1-bromopropane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	125 ppm - 250 ppm	Liver	No effect	14 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

### Conclusion

May cause damage to organs (central nervous system, liver) through prolonged or repeated exposure.

May cause drowsiness or dizziness.

## Mutagenicity (in vitro)

### NOVELEC-S

No (test)data on the mixture available

#### 1-bromopropane

Result	Method	Test substrate	Effect	Value determination	Remark
Positive	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	
Negative	OECD 471	Bacteria (S.typhimurium)		Experimental value	

## Mutagenicity (in vivo)

### NOVELEC-S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

#### 1-bromopropane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474	2 dose(s)/24-hour interval	Mouse (male / female)	Bone marrow	Experimental value

### Conclusion

Not classified for mutagenic or genotoxic toxicity

## Carcinogenicity

### NOVELEC-S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

### Conclusion

Not classified for carcinogenicity

## Reproductive toxicity

### NOVELEC-S

No (test)data on the mixture available

Classification is based on the relevant ingredients

#### 1-bromopropane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOEL	OECD 414	996 ppm	13 days (6h / day)	Rat (male / female)	No effect		Experimental value
	NOEL	Equivalent to OECD 414	100 ppm	13 days (6h / day)	Rat (male / female)	No effect	Foetus	Experimental value
Maternal toxicity	NOEL	OECD 414	100 ppm	13 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility	NOAEL	EPA OPPTS 870.3800	100 ppm		Rat (male / female)	No effect		Experimental value

### Conclusion

May damage fertility.

May damage the unborn child.

## Toxicity other effects

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No (test)data on the mixture available

Reason for revision: 3.2; 9

Publication date: 2007-05-02

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Revision number: 0600

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## Chronic effects from short and long-term exposure

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Impairment of the nervous system. Enlargement/affection of the liver.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### NOVELEC-S

No (test) data on the mixture available

Judgement is based on the relevant ingredients

#### 1-bromopropane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	24.3 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; GLP
	NOEC	OECD 203	1.77 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	99.3 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
	NOEC	OECD 202	29.6 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EbC50	OECD 201	52.4 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
	ErC50	OECD 201	72.3 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
	NOEC	OECD 201	12.4 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro-organisms	EC50	EPA OPPTS 850.6800	270 mg/l	5 minutes	Activated sludge	Static system	Fresh water	Experimental value; GLP
	NOEC	EPA OPPTS 850.6800	100 mg/l	5 minutes	Activated sludge	Static system	Fresh water	Experimental value; GLP

#### Conclusion

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

### 12.2. Persistence and degradability

#### 1-bromopropane

##### Biodegradation water

Method	Value	Duration	Value determination
OECD 301D: Closed Bottle Test	19.2 %	28 day(s)	Experimental value

##### Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	11.6 day(s)	1500000 /cm <sup>3</sup>	Calculated value

##### Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	23 day(s); GLP		Experimental value

#### Conclusion

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)			



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## 1-bromopropane

### BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
Log BCF	BCFBAF v3.00	1.053		Pisces	Calculated value

### BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		23; QSAR			

### Log Kow

Method	Remark	Value	Temperature	Value determination
		2.10		Experimental value

### Conclusion

Does not contain bioaccumulative component(s)

## 12.4. Mobility in soil

### 1-bromopropane

#### (log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	1.79	Experimental value
Koc	OECD 121	61.4	Experimental value

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

Value	Method	Temperature	Remark	Value determination
0.00732 atm m <sup>3</sup> /mol		20 °C		Calculated value

#### Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	44.1 %		0.159 %	10.1 %	45.7 %	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. Other adverse effects

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#### Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Contains component(s) included in the list of substances which may contribute to the greenhouse effect (IPCC)  
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)

### 1-bromopropane

#### Ozone-depleting potential (ODP)

Chemical name	Trade name	Ozone-depleting potential	Group	Formula
1-Bromopropane (n-propyl bromide)		0,02-0,1		C3H7Br

#### 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

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).

20 01 29\* (separately collected fractions (except 15 01): detergents containing hazardous substances). 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. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. 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 10\* (packaging containing residues of or contaminated by dangerous substances).

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## SECTION 14: Transport information

### Road (ADR)

14.1. UN number	UN number	1950
14.2. UN proper shipping name	Proper shipping name	Aerosols
14.3. Transport hazard class(es)	Hazard identification number	
	Class	2
	Classification code	5A
14.4. Packing group	Packing group	
	Labels	2.2
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	190
	Special provisions	327
	Special provisions	344
	Special provisions	625
	Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

### Rail (RID)

14.1. UN number	UN number	1950
14.2. UN proper shipping name	Proper shipping name	Aerosols
14.3. Transport hazard class(es)	Hazard identification number	20
	Class	2
	Classification code	5A
14.4. Packing group	Packing group	
	Labels	2.2
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	190
	Special provisions	327
	Special provisions	344
	Special provisions	625
	Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

### Inland waterways (ADN)

14.1. UN number	UN number	1950
14.2. UN proper shipping name	Proper shipping name	Aerosols
14.3. Transport hazard class(es)	Class	2
	Classification code	5A
14.4. Packing group	Packing group	
	Labels	2.2
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	190
	Special provisions	327
	Special provisions	344
	Special provisions	625
	Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

### Sea (IMDG/IMSBC)

14.1. UN number	UN number	1950
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## 14.2. UN proper shipping name

Proper shipping name	aerosols
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## 14.3. Transport hazard class(es)

Class	2.2
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## 14.4. Packing group

Packing group	
Labels	2.2

## 14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

## 14.6. Special precautions for user

Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	381
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

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

Annex II of MARPOL 73/78	Not applicable
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### Air (ICAO-TI/IATA-DGR)

## 14.1. UN number

UN number	1950
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## 14.2. UN proper shipping name

Proper shipping name	Aerosols, non-flammable
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## 14.3. Transport hazard class(es)

Class	2.2
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## 14.4. Packing group

Packing group	
Labels	2.2

## 14.5. Environmental hazards

Environmentally hazardous substance mark	no
--	----

## 14.6. Special precautions for user

Special provisions	A98
Special provisions	A145
Special provisions	A167
Special provisions	A802

## Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	30 kg G
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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
70 %	
912.800 g/l	

Ingredients according to Regulation (EC) No 648/2004 and amendments

≥30% aliphatic hydrocarbons

REACH Candidate list

Contains component(s) included in candidate list of substances of very high concern (SVHC) for authorisation (Article 59 of Regulation (EC) No 1907/2006)

REACH Annex XIV - Authorisation

Contains component(s) included in Annex XIV of Regulation (EC) No 1907/2006: List of substances subject to authorisation

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
· 1-bromopropane	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	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

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	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.	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. 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.'
· 1-bromopropane	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.	Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30: 1. Shall not be placed on the market, or used, — as substances, — as constituents of other substances, or, — in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: — either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, — the relevant generic concentration limit specified in Part 3 of Annex I of Regulation (EC) No 1272/2008. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: "Restricted to professional users". 2. By way of derogation, paragraph 1 shall not apply to: (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC; (b) cosmetic products as defined by Directive 76/768/EEC; (c) the following fuels and oil products: — motor fuels which are covered by Directive 98/70/EC, — mineral oil products intended for use as fuel in mobile or fixed combustion plants, — fuels sold in closed systems (e.g. liquid gas bottles); (d) artists' paints covered by Regulation (EC) No 1272/2008; (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.
· 1-bromopropane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopee" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only". 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

## National legislation Belgium NOVELEC-S

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No data available

## National legislation The Netherlands

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Waterbezwaarlijkheid	Z (1); Algemene Beoordelingsmethodiek (ABM)
1-bromopropane	
SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	1-broompropaan; 2; Suspected of damaging the unborn child.
SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid)	1-broompropaan; 1B; May damage fertility.

## National legislation France

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No data available

## National legislation Germany

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WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
1-bromopropane	
TA-Luft	5.2.7.1.1/II

## National legislation United Kingdom

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No data available

## Other relevant data

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No data available

1-bromopropane	
IARC - classification	2B; 1-Bromopropane
TLV - Carcinogen	1-Bromopropane; A3

## 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

### 1-bromopropane

A chemical safety assessment has been performed.

## SECTION 16: Other information

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

- H225 Highly flammable liquid and vapour.
- H229 Pressurised container: May burst if heated.
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H360FD May damage fertility. May damage the unborn child.
- H373 May cause damage to organs (central nervous system, liver) through prolonged or repeated exposure.

(*)	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

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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.