

SAFETY DATA SHEET

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

Soudafoam FR

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

1.1. Product identifier

Product name : Soudafoam FR

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

polyurethane

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

SOUDAL N.V. Everdongenlaan 18-20

+32 14 42 65 14

msds@soudal.com

Manufacturer of the product

SOUDAL N.V.

Everdongenlaan 18-20

B-2300 Turnhout

** +32 14 42 42 31 +32 14 42 65 14

msds@soudal.com

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 1	H222: Extremely flammable aerosol.
Aerosol	categ <mark>ory 1</mark>	H229: Pressurised container: May burst if heated.
Carc.	categ <mark>ory 2</mark>	H351: Suspected of causing cancer.
Resp. Sens.	categ <mark>ory 1</mark>	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	categ <mark>ory 1</mark>	H317: May cause an allergic skin reaction.
Acute Tox.	categ <mark>ory 4</mark>	H332: Harmful if inhaled.
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Skin Irrit.	categ <mark>ory 2</mark>	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H335: May cause respiratory irritation.

2.2. Label elements







Contains: polymethylene polyphenyl isocyanate.

Signal word H-statements Danger

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

H351

Suspected of causing cancer.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG) Technische Schoolstraat 43 A, B-2440 Geel

http://www.big.be

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of revision: 2017-09-24

134-15960-582-en

1/17

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
P-statements	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves, protective clothing and eye protection/face protection.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.
Supplemental informati	o <mark>n</mark>

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

Contains component(s) included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

		CAS No EC No		Conc. (C)	Classification according to CLP	Note	Remark
dimethyl ether 01-2119472128-37		115-10-6 204-065-8		1% <c<10%< th=""><th>Flam. Gas 1; H220 Press. Gas - Liquefied gas;</th><th>(1)(2)(10)</th><th>Propellant</th></c<10%<>	Flam. Gas 1; H220 Press. Gas - Liquefied gas;	(1)(2)(10)	Propellant
1,1-difluoroethane 01-2119474440-43		75-37-6 200-866-1		1% <c<10%< td=""><td>Flam. Gas 1; H220 Press. Gas - Liquefied gas;</td><td>(1)(10)</td><td>Propellant</td></c<10%<>	Flam. Gas 1; H220 Press. Gas - Liquefied gas;	(1)(10)	Propellant
polymethylene polyphenyl isocy	yanate	9016-87-9			Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(2)(8)(10)(18)	Constituent
isobutane 01-2119485395-27		75-28-5 200-857-2		1% <c<10%< td=""><td>Flam. Gas 1; H220 Press. Gas - Liquefied gas;</td><td>(1)(2)(10)</td><td>Propellant</td></c<10%<>	Flam. Gas 1; H220 Press. Gas - Liquefied gas;	(1)(2)(10)	Propellant
(1,3-butadiene, conc<0.1%)							
reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester 01-2119486772-26				10% <c<25%< td=""><td>Acute Tox. 4; H302</td><td>(1)(10)</td><td>Constituent</td></c<25%<>	Acute Tox. 4; H302	(1)(10)	Constituent
triethyl phosphate 01-2119492852-28		78-40-0 201-114-5		1% <c<10%< td=""><td>Acute Tox. 4; H302 Eye Irrit. 2; H319</td><td>(1)(10)</td><td>Constituent</td></c<10%<>	Acute Tox. 4; H302 Eye Irrit. 2; H319	(1)(10)	Constituent

⁽¹⁾ For H-statements in full: see heading 16

- (2) Substance with a Community workplace exposure limit
- (8) Specific concentration limits, see heading 16
- (10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
- (18) Polymethylene polyphenyl isocyanate, contains > 0.1% MDI-isomers

Reason for revision: 3 Publication date: 2011-08-16
Date of revision: 2017-09-24

Revision number: 0604 Product number: 51384 2 / 17

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation

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

After skin contact:

Wash immediately with lots of water. Take victim to a doctor if irritation persists.

After eve contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if you feel

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

4.2.1 Acute symptoms

After inhalation:

Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Runny nose. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible inflammation of the respiratory tract. Risk of lung oedema. Respiratory difficulties.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue. Lacrimation.

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.

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 (nitrous vapours, phosphorus oxides, hydrogen bromide, hydrogen chloride, hydrofluoric acid) (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: persistant risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Head/neck protection. Protective clothing. 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 explosion proof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

Reason for revision: 3

Revision number: 0604

6.1.2 Protective equipment for emergency responders

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

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Dam up the liquid spill. Use appropriate containment to avoid environmental contamination.

Publication date: 2011-08-16 Date of revision: 2017-09-24

3 / 17

Product number: 51384

6.3. Methods and material for containment and cleaning up

Allow product to solidify and remove it by mechanical means. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean (treat) contaminated surfaces with acetone. 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 very strict hygiene - avoid contact. 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. Ventilation at floor level. Fireproof storeroom. Unauthorized persons are not admitted. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, ignition sources.

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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Germany

Reason for revision: 3

8.1.1 Occupational exposure

a) Occupational exposure limit values

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

EU			
Dimethylether		Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1000 ppm
		Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1920 mg/m³
Belgium			
1,4'-Diisocyanate de dip	hénylméthane (MDI)	Time-weighted average exposure limit 8 h	0.005 ppm
		Time-weighted average exposure limit 8 h	0.052 mg/m ³
Hydrocarbures aliphatiqu [4]	ies sous forme gazeuse : (Alcanes C1-	Time-weighted average exposure limit 8 h	1000 ppm
Oxyde de diméthyle		Time-weighted average exposure limit 8 h	1000 ppm
		Time-weighted average exposure limit 8 h	1920 mg/m ³
he Netherlands			
Dimethylether		Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	496 ppm
		Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	950 mg/m³
		Short time value (Public occupational exposure limit value)	783 ppm
		Short time value (Public occupational exposure limit value)	1500 mg/m ³
France			
1,4'-Diisocyanate de diph	•	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.01 ppm
		Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m ³
		Short time value (VL: Valeur non réglementaire indicative)	0.02 ppm
		Short time value (VL: Valeur non réglementaire indicative)	0.2 mg/m ³
Oxyde de diméthyle		Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	1000 ppm
		Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	1920 mg/m ³

Revision number: 0604 Product number: 51384 4/17

Publication date: 2011-08-16 Date of revision: 2017-09-24

<u>,</u> , ,	socyanat		Time-weighted average	ge exposure limit 8 h (TRGS 900)		0.05 mg/m ³
imethylether			Time-weighted averag		1000 ppm	
			Time-weighted average	ge exposure limit 8 h (TRGS 900)		1900 mg/m ³
obutan			Time-weighted averag	1000 ppm		
				ge exposure limit 8 h (TRGS 900)		2400 mg/m ³
MDI (als MDI berechnet)		Time-weighted average	ge exposure limit 8 h (TRGS 900)		0.05 mg/m ³
K						
imethyl ether			Time-weighted average (EH40/2005))	ge exposure limit 8 h (Workplace ex	posure limit	400 ppm
				ge exposure limit 8 h (Workplace ex	posure limit	766 mg/m ³
			(EH40/2005))		1	F00
				rkplace exposure limit (EH40/2005) rkplace exposure limit (EH40/2005)		500 ppm 958 mg/m ³
ocyanates, all (as -NCO)	Evcent me	athyl isocyanate		ge exposure limit 8 h (Workplace ex		0.02 mg/m ³
ocyanates, an (as -1400)	Lxcept me	triyi isocyanate	(EH40/2005))	ge exposure illilit a il (workplace ex	posure minic	0.02 1118/111
				rkplace exposure limit (EH40/2005))	0.07 mg/m ³
SA (TLV-ACGIH)						
utane, all isomers			Short time value (TLV	- Adopted Value)		1000 ppm
1ethylene bisphenyl isoc	yanate (MI	OI)	Time-weighted average	ge exposure limit 8 h (TLV - Adopted	d Value)	0.005 ppm
National biological lim	it values					
	ole and avai	ilable these will be listed b	elow.			
Sampling methods			Toot	Number		
roduct name			Test NIOSH	Number 5521		
ocyanates ocyanates			NIOSH	5522		
	uda on uning	g the substance or mixtur		5522		
Effect level (DNEL/DM		1-methylethyl bis(2-chloro Type	propyr) ester	Value	Remark	
DNEL		Long-term systemic effe		5.82 mg/m ³		
		Acute systemic effects in		22.4 mg/m³		
		Long-term systemic effect		2.08 mg/kg bw/day		
iethyl phosphate		Acute systemic effects d	ermai	8 mg/kg bw/day		
Effect level (DNEL/DME	EL)	Туре		Value	Remark	
DNEL		Long-term systemic effe	cts inhalation	11.81 mg/m³		
		Acute systemic effects in	halation	94.5 mg/m³		
		Long-term systemic effe		3.35 mg/kg bw/day		
		Acute systemic effects de	ermal	26.8 mg/kg bw/day		
NEL/DMEL - General po			and another lasts. IN also		hlasa 4 saath	1.11.11.2.11.
		1-methylethyl bis(2-chloro		sphate and phosphoric acid, bis(2-c	mioro-1-meth	yletnyi) 2-chio
		Туре	<u>p. 001.7 co.c.</u>	Value	Remark	
Effect level (DNEL/DML		Long-term systemic effe	cts inhalation	1.46 mg/m ³		
Effect level (DNEL/DME DNEL				11.40 Hig/III		
		Acute systemic effects in		11.2 mg/m ³		
		Acute systemic effects in Long-term systemic effects	halation	11.2 mg/m³ 1.04 mg/kg bw/day		
		Long-term systemic effects d	halation cts dermal ermal	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day		
DNEL		Long-term systemic effe	halation cts dermal ermal	11.2 mg/m³ 1.04 mg/kg bw/day		
DNEL iethyl phosphate	3)	Long-term systemic effects d Acute systemic effects d Long-term systemic effects	halation cts dermal ermal	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day	Domark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects d Acute systemic effects d Long-term systemic effect	halation cts dermal ermal cts oral	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day	Remark	
	EL)	Long-term systemic effects de Long-t	cts inhalation	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects d Acute systemic effects d Long-term systemic effect	cts inhalation cts inhalation	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects de Long-term systemic effects de Long-term systemic effects de Long-term systemic effects de Long-term systemic effects in Acute systemic effects in	cts oral cts inhalation cts dermal cts oral cts inhalation cts dermal	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³ 23.28 mg/m³	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects d Long-term systemic effects d Long-term systemic effects Type Long-term systemic effects in Long-term systemic effects in	cts dermal cts oral cts oral cts inhalation cts dermal ermal	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³ 23.28 mg/m³ 1.67 mg/kg bw/day	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects d Long-term systemic effects d Long-term systemic effect Type Long-term systemic effects in Long-term systemic effects d Acute systemic effects d	cts oral cts dermal cts oral cts inhalation chalation cts dermal cts oral	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³ 23.28 mg/m³ 1.67 mg/kg bw/day 13.36 mg/kg bw/day	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI	EL)	Long-term systemic effects d Long-term systemic effects d Long-term systemic effect Type Long-term systemic effects in Long-term systemic effects d Long-term systemic effects d Long-term systemic effects d	cts oral cts dermal cts oral cts inhalation chalation cts dermal cts oral	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³ 23.28 mg/m³ 1.67 mg/kg bw/day 13.36 mg/kg bw/day 1.67 mg/kg bw/day	Remark	
DNEL iethyl phosphate Effect level (DNEL/DMI DNEL	EL)	Long-term systemic effects d Long-term systemic effects d Long-term systemic effect Type Long-term systemic effects in Long-term systemic effects d Long-term systemic effects d Long-term systemic effects d	cts oral cts dermal cts oral cts inhalation chalation cts dermal cts oral	11.2 mg/m³ 1.04 mg/kg bw/day 4 mg/kg bw/day 0.52 mg/kg bw/day Value 2.91 mg/m³ 23.28 mg/m³ 1.67 mg/kg bw/day 13.36 mg/kg bw/day 1.67 mg/kg bw/day	Remark	

Revision number: 0604 Product number: 51384 5 / 17

Publication date: 2011-08-16 Date of revision: 2017-09-24

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reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Compartments	Value	Remark
Fresh water	0.64 mg/l	
Aqua (intermittent rele <mark>ases)</mark>	0.51 mg/l	
Marine water	0.064 mg/l	
STP	7.84 mg/l	
Fresh water sediment	13.4 mg/kg sediment dw	
Marine water sediment	1.34 mg/kg sediment dw	
Soil	1.7 mg/kg soil dw	
Oral	11.6 mg/kg food	
iothul phosphata		

triethyl phosphate

Compartments	Value	Remark
Fresh water	<mark>0.632 m</mark> g/l	
Salt water	<mark>0.063 m</mark> g/l	
STP	<mark>298.5 m</mark> g/l	
Fresh water sediment	<mark>5 mg/kg s</mark> ediment dw	
Marine water sediment	<mark>0.5 mg/k</mark> g sediment dw	
Soil	<mark>0.64 mg/</mark> 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

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 very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

Materials	Breakthrough time	Thickness
LDPE (Low Density Poly E <mark>thylene)</mark>	> 10 minutes	0.025 mm

- materials (good resistance)

LDPE (Low Density Poly Ethylene).

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		Variable in colour, depending on the composition
Particle size		No data available
Explosion limits		No data available
Flammability		Extremely flammable aerosol.
Log Kow		Not applicable (mixture)
Dynamic viscosity		No data available
Kinematic viscosity		No data available
Melting point		No data available
Boiling point		No data available
Flash point		Not applicable
Evaporation rate		No data available
Relative vapour density		1.1
Vapour pressure		No data available
Solubility		Water ; insoluble
Relative density		1.1; 20 °C
Decomposition temperat	ture	No data available
Auto-ignition temperatu	re	N <mark>o data availa</mark> ble

Reason for revision: 3 Publication date: 2011-08-16
Date of revision: 2017-09-24

Revision number: 0604 Product number: 51384 6 / 17

Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
рН	No data available
0	

9.2. Other information

Absolute density 1100 kg/m³; 20 °C

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

No data available.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, phosphorus oxides, hydrogen bromide, hydrogen chloride, hydrofluoric acid) (carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

Soudafoam FR

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50		> 10000 mg/kg		Rat	Literature study	
Dermal	LD50		<mark>> 5000 m</mark> g/kg		Rabbit	Literature study	
Inhalation (vapours)	LD50		<mark>10 mg/l -</mark> 20 mg/l	4 h	Rat	Literature study	
Inhalation			category 4			Literature study	

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Route of exposure	Parame	ter Method	Value	Exposure time	Species		Remark
					(5	determination	
Oral	LD50	EU Method B.1 tris	632 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male/female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	> 7 mg/l	4 h	Rat (male/female)	Experimental value	

triethyl phosphate

Route of exposure	Parameter	Method	Value	Exposure time		Value determination	Remark
Oral	LD50		1600 mg/kg			Inconclusive, insufficient data	
Dermal	LD50		> 20000 mg/kg bw			Inconclusive, insufficient data	
Inhalation (aerosol)	LC50	OECD 403	> 8.817 mg/l air	4 h	Rat (male/female)	Experimental value	

Conclusion

Harmful if inhaled.

Not classified as acute toxic in contact with skin Not classified as acute toxic if swallowed

Corrosion/irritation

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Soudafoam FR

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
						determination	
Eye	Irritating;					Literature study	
	category 2						
Skin	Irritating;					Literature study	
	category 2						
Inhalation	Irritating;					Literature study	
	STOT SE cat.3						

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Not irrit <mark>ating</mark>	OECD 405	24 h	7 days	Rabbit	Experimental value	
Skin	Not irrit <mark>ating</mark>	OECD 404	4 h	7 days	Rabbit	Experimental value	

triethyl phosphate

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Modera <mark>tely</mark> irritating	OECD 405		1; 24; 48; 72 hrs; 7; 14; 21 days	Rabbit	Experimental value	
Skin	Not irrit <mark>ating</mark>	OECD 404		1; 24; 48; 72; 168 hours	Rabbit	Experimental value	

Conclusion

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Respiratory or skin sensitisation

Soudafoam FR

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	•	Observation time point	Species	Value determination	Remark
	Sensitizi <mark>ng;</mark> category 1					Literature study	
Inhalation	Sensitizin <mark>g;</mark> category 1					Literature study	

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Route of exposure	Result	Method	Observation time point	Species	Value determination	Remark
Skin	Not sens <mark>itizing</mark>	OECD 429		Mouse (female)	Experimental value	

triethyl phosphate

Route of exposure	Result	Meth	nod E	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitiz	ing OECD) 429			Mouse (female)	Experimental value	
Inhalation							Data waiving	

Conclusion

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity

Soudafoam FR

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Value determination
Inhalation			STOT RE cat.2				Literature study

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Revision number: 0604 Product number: 51384 8 / 17

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Route of exposure	Paramet	ter	Method	Value	Organ	Effect	Exposure time		Value determination
Oral (diet)	NOAEL			171 mg/kg bw/day		No effect	13 weeks (daily)		Experimental value
Oral (diet)	LOAEL			52 mg/kg bw/day	Liver	Weight gain	13 weeks (daily)	` '	Experimental value
Inhalation (vapours)	Dose lev	el		0.586 mg/l air		No effect		` '	Experimental value

triethyl phosphate

Route of exposure	Parame	eter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL			1000 mg/kg bw/day		No effect	4 weeks (daily)	Rat (male/female)	Experimental value
Dermal									Data waiving
Inhalation (aerosol)	NOAEC		Subchronic toxicity test	366 mg/m³ air			12 weeks (6h/day, 5 days/week)	Rat (male)	Inconclusive, insufficient data

Conclusion

May cause damage to organs through prolonged or repeated exposure if inhaled.

Not classified as sub-chronically toxic in contact with skin

Not classified as sub-chronically toxic if swallowed

Mutagenicity (in vitro)

Soudafoam FR

No (test)data on the mixture available

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic	OECD 482	Rat liver cells		Experimental value
activation, negative without				
metabolic activation				
Negative without metabolic	OECD 476	Mouse (lymphoma L5178Y		Experimental value
activation, positive with		cells)		
metabolic activation				

triethyl phosphate

illyl phosphate				
Result	Method	Test substrate	Effect	Value determination
Negative with metabolic	OECD 476	Chinese hamster lung	No effect	Experimental value
activation, negative withou <mark>t</mark>		fibroblasts (V79)		
metabolic activation				
Negative with metabolic	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
activation, negative without				
metabolic activation				
	Result Negative with metabolic activation, negative without metabolic activation	Result Negative with metabolic activation, negative without metabolic activation Negative with metabolic activation, negative without activation, negative without Method OECD 476 OECD 471	Result Method Test substrate Negative with metabolic activation, negative without metabolic activation Negative with metabolic activation OECD 471 OECD 471 Bacteria (S.typhimurium)	Result Method Test substrate Effect Negative with metabolic activation, negative without metabolic activation, negative with metabolic activation Negative with metabolic activation OECD 471 Bacteria (S.typhimurium) No effect

Mutagenicity (in vivo)

Soudafoam FR

No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

	Result	Method Exposure time		Test substrate	Organ	Value determination
	Negative	OECD 474		Mouse (male/female)	Bone marrow	Experimental value
trie	thyl phosphate					

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative			Mouse (male)	Bone marrow	

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

Soudafoam FR

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value
exposure								determination
Unknown			category 2		4			Literature study

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reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl

ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	 Value determination
Inhalation							Data waiving
Dermal							Data waiving
Oral							Data waiving

Conclusion

Suspected of causing cancer.

Reproductive toxicity

Soudafoam FR

No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

	Parameter	Method	Value	Exposure time	Species	Effect	. 3.	Value determination
Developmental toxicity	LOAEL		99 mg/kg bw/day		Rat (female)	Embryotoxicity		Experimental value
Effects on fertility	LOAEL		99 mg/kg bw/day		Rat (male/female)		Female reproductive organ	Experimental value

triethyl phosphate

	Parameter	Method	Value	Exposure time	Species	Effect	- 3 -	Value determination
Developmental toxicity	NOAEL		<mark>625 m</mark> g/kg bw/day	10 day(s)	Rat	No effect		Experimental value
Maternal toxicity	NOAEL		125 mg/kg bw/day	10 day(s)	Rat	No effect		Experimental value
Effects on fertility	NOEL		U, U	120 day(s) - 150 day(s)	Rat (male/female)	No effect		Inconclusive, insufficient data

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Soudafoam FR

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Soudafoam FR

Feeling of weakness. Itching. Skin rash/inflammation. May stain the skin. Dry skin. Coughing. Possible inflammation of the respiratory tract. Respiratory difficulties.

SECTION 12: Ecological information

12.1. Toxicity

Soudafoam FR

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

polymethylene polyphenyl isocyanate

	Parameter	Method	Value	Duration	Species	 Fresh/salt water	Value determination
Acute toxicity other aquatic organisms	LC50		> 1000 mg/l	96 h			Literature study
Toxicity aquatic micro- organisms	EC50	OECD 209	> 100 mg/l		Activated sludge		Literature study

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Revision number: 0604 Product number: 51384 10/17

ster and phosphoric acid, 2-c <mark>hlo</mark>	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determi
Acute toxicity fishes	LC50	Other	56.2 mg/	1 96 h	Brachydanio rerio	Static system	1 1 1 1	Experimental v
Acute toxicity crustacea	LC50		131 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental v
Toxicity algae and other aqu <mark>ati</mark> plants	c ErC50	OECD 201	82 mg/l	72 h	Pseudokirchnerie Ila subcapitata	Static system	Fresh water	Experimental v
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 202	32 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental v GLP
Toxicity aquatic micro- organisms	EC50	ISO 8192	784 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental v GLP
iethyl phosphate						1		
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determi
Acute toxicity fishes	LC50	Equivalent to OECD 203	> 100 mg	g/l 96 h	Danio rerio		Fresh water	Experimental v Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	2705 mg	/l 24 h	Daphnia magna		Fresh water	Experimental v Nominal concentration
Toxicity algae and other aqu <mark>ati</mark> plants	c EC50	Other	901 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental v Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	31.6 mg/	1 21 day(s)	Daphnia magna		Fresh water	Experimental v
olymethylene polyphenyl isocya	•	Value		Dur	C) No 1272/2008	Va	lue determina	ition
OECD 302C: Inherent Biodeg	anate_	Value < 60 %		Dur			lue determina perimental val	
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) Paction mass of tris(2-chloropro	radability:	< 60 % e and tris(2-chlo		nylethyl) phospha	ation	Ехі	perimental val	ue
Dlymethylene polyphenyl isocy Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) action mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and phosphoric acid, 2-chloroproster	radability:	< 60 % e and tris(2-chlo		nylethyl) phospha	ation	Ехі	perimental val	ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) action mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and phosphoric water	radability:	< 60 % e and tris(2-chloro thyl bis(2-chloro		nylethyl) phospha	ation ate and phosphoric a	Exp ocid, bis(2-chlor	perimental val	ue hyl) 2-chloropro
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation MITI Test (II) Faction mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and phosphoric acid, 2-chloroproster and Method	radability: pyl) phosphate pro-1-methylet	< 60 % e and tris(2-chloro hyl bis(2-chloro		nylethyl) phosphater Dur	ation ate and phosphoric a ation	Exp acid, bis(2-chlor	perimental vali ro-1-methyletl lue determina	ue hyl) 2-chloropro I tion
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradified MITI Test (II) Paction mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and 2	radability: pyl) phosphate pro-1-methylet	< 60 % e and tris(2-chloro hyl bis(2-chloro		nylethyl) phosphater Dur	ation ate and phosphoric a	Exp acid, bis(2-chlor	perimental val	ue hyl) 2-chloropro I tion
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation MITI Test (II) Faction mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and phosphoric acid, 2-chloroproster and Method	radability: pyl) phosphate pro-1-methylet	< 60 % e and tris(2-chloro hyl bis(2-chloro		nylethyl) phospha tter Dur. 28 c	ation ate and phosphoric a ation day(s)	Exp ocid, bis(2-chlor Va Exp	perimental vali ro-1-methyletl lue determina	ue hyl) 2-chloropro ition ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradified MITI Test (III) Biodegradation mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster ac	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlo chyl bis(2-chloro Value 14 %; GLP		nylethyl) phosphiter Duri 28 c	ation ate and phosphoric a ation	Explicid, bis(2-chlorid) Va Explicit Va	perimental val ro-1-methyletl lue determina perimental val	ue hyl) 2-chloropro ition ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradified MITI Test (III) Biodegradation mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster acid, 2-c	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlo hyl bis(2-chloro Value 14 %; GLP		nylethyl) phosphiter Duri 28 c	ation ate and phosphoric a ation lay(s) c. OH-radicals	Explicid, bis(2-chlorid) Va Explicit Va	perimental val ro-1-methyletl lue determina perimental val lue determina	ue hyl) 2-chloropro ition ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradified MITI Test (III) Biodegradation mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster acid, 2-c	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlo hyl bis(2-chloro Value 14 %; GLP		Dur. 28 c Con	ation ate and phosphoric a ation lay(s) c. OH-radicals	Exposition of the control of the con	perimental value determina perimental value determina luue determina luulated value lue determina	ue hyl) 2-chloropro ition ue
Olymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation water Modified MITI Test (III) action mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster acid, 2-chloroproster and phosphoric acid, 2-chloroproster and 2-chloro	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlorohyl bis(2-chloro Value 14 %; GLP Value 8.6 h		Dur. 28 c Con	ation ate and phosphoric a ation lay(s) c. OH-radicals 000 /cm ³	Exposition of the control of the con	perimental value determina perimental value determina lue determina lue determina luelated value	ue hyl) 2-chloropro ition ue
Olymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation water Modified MITI Test (III) action mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster acid, 2-chloroproster and phosphoric acid, 2-chloroproster and 2-chloro	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlorohyl bis(2-chloro Value 14 %; GLP Value 8.6 h		Dur. Con	ation ate and phosphoric a ation lay(s) c. OH-radicals 000 /cm ³	Va Cal	perimental value determina perimental value determina luue determina luulated value lue determina	ue hyl) 2-chloropro ition ue ition
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation water Modified MITI Test (III) Biodegradation water Method OECD 301E: Modified OECD STATE Method AOPWIN v1.92 Biodegradation soil Method Method Half-life water (t1/2 water)	radability: pyl) phosphate pro-1-methylet	e and tris(2-chlorhyl bis(2-chloro Value 14 %; GLP Value 8.6 h		pylethyl) phosphater Dura 28 c Con 500 Dura Prin deg	ation ate and phosphoric a ation lay(s) c. OH-radicals 000 /cm ³ ation	Va Da	perimental value determina perimental value determina lculated value lue determina ta waiving	ue hyl) 2-chloropro ution ue tion
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) action mass of tris(2-chloropro iter and phosphoric acid, 2-chloropro iter and acid, 2-chloropro iter and acid, 2-chloropro iter and acid, 2-chlorop	radability: pyl) phosphate pro-1-methylet	< 60 % e and tris(2-chloroly) bis(2-chloroly) bis(2-chloroly) Value 14 %; GLP Value 8.6 h Value		pylethyl) phosphater Dura 28 c Con 500 Dura Prin deg	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation nary radation/mineralisa	Va Da	lue determina lculated value lue determina lculated value lue determina ta waiving	ue hyl) 2-chloropro ution ue tion
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation water Modified MITI Test (III) Biodegradation water Method OECD 301E: Modified OECD STANDER Method AOPWIN v1.92 Biodegradation soil Method Half-life water (t1/2 water) Method EU Method C.7 iethyl phosphate Biodegradation water	radability: pyl) phosphate pro-1-methylet	< 60 % e and tris(2-chloroly) bis(2-chloroly) bis(2-chloroly) Value 14 %; GLP Value 8.6 h Value Value > 1 year(s)		Duri	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation nary radation/mineralisa nary degradation	Va Da tion	lue determina localitated value lue determina localitated value lue determina ta waiving lue determina	ue hyl) 2-chloropro ution ue ttion ttion ution
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) action mass of tris(2-chloropro ster and phosphoric acid, 2-chloropro ster and acid, 2-chloropro ster and acid, 2-chloropro ster and acid, 2-chlorop	radability: pyl) phosphate pro-1-methylet Screening Test D air)	< 60 % e and tris(2-chloroly) bis(2-chloroly) bis(2-chloroly) Value 14 %; GLP Value 8.6 h Value Value > 1 year(s)		pylethyl) phosphater During	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation mary radation/mineralisa mary degradation ation	Va tion Exp Va Va Va Va	lue determina ta waiving lue determina ta waiving lue determina ta waiving lue determina	ue hyl) 2-chloropro ution ue tion ution ution
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodegradation water Modified MITI Test (III) Biodegradation water Method OECD 301E: Modified OECD STANDER Method AOPWIN v1.92 Biodegradation soil Method Half-life water (t1/2 water) Method EU Method C.7 iethyl phosphate Biodegradation water	radability: pyl) phosphate pro-1-methylet Screening Test D air)	< 60 % e and tris(2-chloroly) bis(2-chloroly) bis(2-chloroly) Value 14 %; GLP Value 8.6 h Value Value > 1 year(s)		pylethyl) phosphater During	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation nary radation/mineralisa nary degradation	Va tion Exp Va Va Exp Va Va Exp Va	lue determina localitated value lue determina localitated value lue determina ta waiving lue determina	ue hyl) 2-chloropro ition ue ition ution ution ue ition ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) Paction mass of tris(2-chloroproster and phosphoric acid, 2-chloroproster and 2-chloroproster acid, 2-chloroproster and 2-chloroproster and 2-chloroproster acid, 2-chloroproster and 2-chloroproster acid, 2-chlorop	radability: pyl) phosphate pro-1-methylet Screening Test Dair) est (I) radability:	<pre>value value v</pre>		pylethyl) phosphater During	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation mary radation/mineralisa nary degradation ation day(s)	Va tion Exp Va Va Exp Va Va Exp Va	lue determina ta waiving lue determina ta waiving lue determina ta waiving lue determina ta waiving	ue hyl) 2-chloropro tion ue tion tion ution ution ue
Dlymethylene polyphenyl isocya Biodegradation water Method OECD 302C: Inherent Biodeg Modified MITI Test (II) action mass of tris(2-chloropro iter and phosphoric acid, 2-chloropro it	radability: pyl) phosphate pro-1-methylet Screening Test Dair) est (I) radability:	<pre>value value v</pre>		pylethyl) phosphater During	ation ate and phosphoric a ation day(s) c. OH-radicals 000 /cm³ ation mary radation/mineralisa nary degradation ation day(s)	Va tion Exp Va Va Exp Va Va Exp Va	lue determina ta waiving lue determina ta waiving lue determina ta waiving lue determina ta waiving	ue hyl) 2-chloroprop tion ue tion tion ue tion ue tion

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Reason for revision: 3

Publication date: 2011-08-16

Date of revision: 2017-09-24

Not applicable (mixture)			

polymethylene polyphenyl isocyanate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		1		Pisces	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	0.8 - 14; Fresh	6 week(s)	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		<mark>2.68</mark>	30 °C	Experimental value

triethyl phosphate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	0.5 - 1.3; Fresh	<mark>6 w</mark> eek(s)	Cyprinus carpio	Experimental value
		weight			

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		1.11		Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

(log) Koc

Parameter		Method	Value	Value determination	
log Koc			2.76	Experimental value	

Percent distribution

Method	Fraction air		Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	0.01 %	0 %	3.55 %	3.52 %	92.89 %	Read-across

triethyl phosphate

(log) Koc

Parameter N		Method	Value	Value determination
log Koc		SRC PCKOCWIN v2.0	1.642	QSAR

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

Soudafoam FR

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

Contains component(s) 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)

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).

08 05 01* (wastes not otherwise specified in 08: waste isocyanates).

16 05 04* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

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 Revision number: 0604
 Product number: 51384
 12 / 17

13.1.2 Disposal methods

Recycle/reuse. 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. Specific treatment. Do not discharge into drains or the environment.

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).

13 01 10 (packaging containing residues of of con-	by dangerous substances).
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	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardo <mark>us substance mark</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	2555
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	, ici cocio
Hazard identification number	23
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
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	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardo <mark>us substance mark</mark>	no
Reason for revision: 3	Publication date: 2011-08-16
Neuson for revision. 3	Date of revision: 2017-09-24
	Date of Tevision, 2017-09-24

Revision number: 0604 Product number: 51384 13 / 17

	Sou	dafoam FR
14.6. Special precautions for	r 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
14.2. UN proper shipping na	ame	
Proper shipping name		Aerosols
14.3. Transport hazard class	(es)	
Class		2.1
14.4. Packing group		
Packing group		
Labels		2.1
14.5. Environmental hazard	s	
Marine pollutant		-
Environmentally hazard	ous substance mark	no
14.6. Special precautions for	r 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 acco	rding to Annex II of Marpol and the IBC	Code
Annex II of MARPOL 73/	78	Not applicable
Air (ICAO-TI/IATA-DGR)		
14.1. UN number		
UN number		1950
14.2. UN proper shipping na	ame	
Proper shipping name		Aerosols, flammable
14.3. Transport hazard class	s(es)	h a
Class		2.1
14.4. Packing group		
Packing group		
Labels		2.1
14.5. Environmental hazard		
Environmentally hazard		no
14.6. Special precautions for	ruser	
Special provisions		A145
Special provisions		A167
Special provisions		A802
Limited quantities: maxi	mum net quantity per packaging	30 kg G

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	Rema	rk		
16.84 % - 18.13 %				
185.2 g/l - 199.43 g/l				

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
· polymethylene polyphenyl isocyanate	Liquid substances or mixtures which are	1. Shall not be used in:
· reaction mass of tris(2-chloropropyl)	regarded as dangerous in accordance with	— ornamental articles intended to produce light or colour effects by means of different
phosphate and tris(2-chloro-1-methylethyl)	Directive 1999/45/EC or are fulfilling the	phases, for example in ornamental lamps and ashtrays,

Reason for revision: 3 Publication date: 2011-08-16 Date of revision: 2017-09-24

Revision number: 0604 Product number: 51384 14 / 17

	Ooddal	Odiffic
phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl este and phosphoric acid, 2-chloro-1-methylethis(2-chloropropyl) ester - triethyl phosphate - polymethylene polyphenyl isocyanate	criteria for any of the following hazard class or categories set out in Annex I to Regulatio (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 and 2, 2.14 categories 1 and 2, 2.15 types A 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 narcoti effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	es — 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. 2s 13. 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 R65 or 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 R65 or 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 or 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 R65 or 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 R65 or 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 be 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 R65 or H304, intended for
	Methylenediphenyl diisocyanate; 2,4'- Methylenediphenyl diisocyanate; 2,2'- Methylenediphenyl diisocyanate	public, unless suppliers shall ensure before the placing on the market that the packaging: (a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC; (b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures: "— Persons already sensitised to diisocyanates may develop allergic reactions when using this product. — Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. — This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. 2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.
National legislation Belgium Soudafoam FR No data available National legislation The Netherla	and <u>s</u>	
Soudafoam FR Waterbezwaarlijkheid	7 (2)	
National legislation France Soudafoam FR No data available polymethylene polyphenyl isc Catégorie cancérogène	Z (2) ocyanate 4,4'-Diisocyanate de diphénylméthane	e; C2
National legislation Germany		
Soudafoam FR WGK	1; Classification water polluting based	on the components in compliance with Verwaltungsvorschrift wassergefährdende
	Stoffe (VwVwS) of 27 July 2005 (Anhai	
son for revision: 3		Publication date: 2011-08-16 Date of revision: 2017-09-24
ision number: 0604		Product number: 51384 15 / 17

Revision number: 0604 Product number: 51384 15 / 17

oolymethylene polyphen	yl isocy	anate
TA-Luft		5.2.5; I
TRGS900 - Risiko der		4,4'-Methylendiphenyldiisocyanat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes
Fruchtschädigung		<mark>und des biologischen Grenzwe</mark> rtes nicht befürchtet zu werden
		pMDI (als MDI berechnet); Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des
		biologischen Grenzwertes nicht befürchtet zu werden
Sensibilisierende Stoffe		4,4'-Methylendiphenyldiisocyanat; Sah; Atemwegssensibilisierende Stoffe Und Hautsensibilisierende Stoffe, an beiden
		Zielorganen Allergien auslösende
		pMDI (als MDI berechnet); Sa; Atemwegssensibilisierende Stoffe
TRGS905 - Krebserzeugend		Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); 2
TRGS905 - Erbgutverändernd		Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
TRGS905 -		Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
Fruchtbarkeitsgefährde <mark>nd</mark>		
TRGS905 - Fruchtschädigend		Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
Hautresorptive Stoffe		4,4'-Methylendiphenyldiisocyanat; H; Hautresorptiv
		pMDI (als MDI berechnet); H; Hautresorptiv
RGS905 - Fruchtschäd lautresorptive Stoffe	igend	4,4'-Methylendiphenyldiisocyanat; H; Hautresorptiv

reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester

TA-Luft	5.2.5		
triethyl phosphate			
TA-Luft	5.2.5		

National legislation United Kingdom

Soudafoam FR

No data available

polymethylene polyphenyl isocyanate

Skin Sensitisation	socyanates, all (as -NCO) Except methyl isocyanate; Sen
Respiratory sensitisation	Isocyanates, all (as -NCO) Except methyl isocyanate; Sen

Other relevant data

Soudafoam FR

No data available

<u>polymethylene polyphenyl isocyanate</u>

IARC - classification 3; Polymethylene polyphenyl isocyanate

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

triethyl phosphate

A chemical safety assessment has been performed.

SECTION 16: Other information

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

H220 Extremely flammable gas.

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

(*) INTERNAL CLASSIFICATION BY BIG
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

Reason for revision: 3 Publication date: 2011-08-16
Date of revision: 2017-09-24

Revision number: 0604 Product number: 51384 16 / 17

vPvB very Persistent & very Bioaccumulative

Specific concentration limits CLP

polymethylene polyphen	yl isocyanate	C≥5%	Eye Irrit 2;H319	analogous to Annex VI
		C≥5%	Skin Irrit 2;H315	analogous to Annex VI
		C≥0.1%	Resp Sens 1;H334	analogous to Annex VI
		C≥5%	STOT SE 3;H335	analogous to Annex VI

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Revision number: 0604 Product number: 51384 17/17