

SURFACE ACTIVATOR

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

1.1 Product identifier:

Product name : SURFACE ACTIVATOR
 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

Detergent according to Regulation (EC) No 648/2004

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

SOULDAL N.V.
 Everdongenlaan 18-20
 B-2300 Turnhout
 ☎ +32 14 42 42 31
 ☐ +32 14 42 65 14
 msds@soudal.com

Manufacturer of the product

SOULDAL 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:

2.1.1 Classification according to Regulation EC No 1272/2008

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

Class	Category	Hazard statements
Flam. Liq.	category 2	H225: Highly flammable liquid and vapour.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

F; R11 - Highly flammable.

Xi; R36 - Irritating to eyes.

R67 - Vapours may cause drowsiness and dizziness.

2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)



Contains: propan-2-ol.

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Signal word

Danger

H-statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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.
P280 Wear protective gloves and eye protection/face protection.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels



Highly flammable



Irritant

R-phrases

36 Irritating to eyes
67 Vapours may cause drowsiness and dizziness

S-phrases

(02) (Keep out of the reach of children)
07 Keep container tightly closed
16 Keep away from sources of ignition - No smoking
24/25 Avoid contact with skin and eyes
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

2.3 Other hazards:

CLP

May build up electrostatic charges: risk of ignition
May be ignited by sparks
Gas/vapour spreads at floor level: ignition hazard

DSD/DPD

May build up electrostatic charges: risk of ignition
May be ignited by sparks
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 DSD/DPD	Classification according to CLP	Note	Remark
propan-2-ol 01-2119457558-25	67-63-0 200-661-7	C>25 %	F; R11 Xi; R36 R67	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
titanium tetraisopropanolate 01-2119967389-17	546-68-9 208-909-6	1%<C<20%	Xi; R36 R10 R67	Flam. Liq. 3; H226 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(10)	Constituent

(1) For R-phrases and H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

Reason for revision: ATP4

Publication date: 2011-05-03

Date of revision: 2014-10-21

Revision number: 0300

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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. Never give alcohol to drink.

After inhalation:

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

After skin contact:

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Apply a moist gauze patch.

After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. 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. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.

After skin contact:

Not irritating.

After eye contact:

Irritation of the eye tissue.

After ingestion:

AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Disturbed motor response. Headache. Disturbances of consciousness. Dilation of the blood vessels. Low arterial pressure. Vomiting. Nausea. Abdominal pain. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration.

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:

Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2 Special hazards arising from the substance or mixture:

Upon combustion: CO and CO₂ are formed.

5.3 Advice for firefighters:

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. 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 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 goggles. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Contain leaking substance. Dam up the liquid spill. Try to reduce evaporation. Prevent spreading in sewers. Use appropriate containment to avoid environmental contamination.

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6.3 Methods and material for containment and cleaning up:

Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. 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:

Keep away from naked flames/heat. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: keep naked flames/sparks away. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. May be stored under nitrogen. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

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

7.2.3 Suitable packaging material:

Tin.

7.2.4 Non suitable packaging material:

No data available

7.3 Specific end use(s):

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

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

The Netherlands

2-Propanol	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	260 ppm	
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	650 mg/m ³	

Belgium

Alcool isopropylique	Time-weighted average exposure limit 8 h	200 ppm	
	Time-weighted average exposure limit 8 h	500 mg/m ³	
	Short time value	400 ppm	
	Short time value	1000 mg/m ³	

USA (TLV-ACGIH)

2-propanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm	
	Short time value (TLV - Adopted Value)	400 ppm	

Germany

Propan-2-ol	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm	
	Time-weighted average exposure limit 8 h (TRGS 900)	500 mg/m ³	

France

Alcool isopropylique	Short time value (VL: Valeur non réglementaire indicative)	400 ppm	
	Short time value (VL: Valeur non réglementaire indicative)	980 mg/m ³	

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UK

Propan-2-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	400 ppm	
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	999 mg/m ³	
	Short time value (Workplace exposure limit (EH40/2005))	500 ppm	
	Short time value (Workplace exposure limit (EH40/2005))	1250 mg/m ³	

b) National biological limit values

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

8.1.2 Sampling methods

If applicable and available it will be listed below.

Isopropanol (Volatile Organic compounds)	NIOSH	2549	
Isopropyl Alcohol (Alcohols I)	NIOSH	1400	
Isopropyl Alcohol	OSHA	109	

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 DNEL/PNEC values

DNEL - Workers

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	888 mg/kg bw/day	
	Long-term systemic effects inhalation	500 mg/m ³	

titanium tetraisopropanolate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	500 mg/m ³	

DNEL - General population

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	319 mg/kg bw/day	
	Long-term systemic effects inhalation	89 mg/m ³	
	Long-term systemic effects oral	26 mg/kg bw/day	

PNEC

propan-2-ol

Compartments	Value	Remark
Fresh water	140.9 mg/l	
Marine water	140.9 mg/l	
Aqua (intermittent releases)	140.9 mg/l	
STP	2251 mg/l	
Fresh water sediment	552 mg/kg sediment dw	
Marine water sediment	552 mg/kg sediment dw	
Soil	28 mg/kg soil dw	
Oral	160 mg/kg food	

titanium tetraisopropanolate

Compartments	Value	Remark
Fresh water	0.59 mg/l	
Salt water	0.059 mg/l	
Aqua (intermittent releases)	5.9 mg/l	
STP	105 mg/l	
Fresh water sediment	0.482 mg/kg sediment dw	
Marine water sediment	0.0482 mg/kg sediment dw	
Soil	0.112 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2 Exposure controls:

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

8.2.1 Appropriate engineering controls

Reason for revision: ATP4

Publication date: 2011-05-03

Date of revision: 2014-10-21

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Keep away from naked flames/heat. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: keep naked flames/sparks away. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. 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 (good resistance)

Butyl rubber, nitrile rubber, viton, neoprene, chloroprene rubber, chlorosulfonated polyethylene, tetrafluoroethylene.

- materials (less resistance)

Chlorinated polyethylene, PVC, neoprene/natural rubber.

- materials (poor resistance)

Natural rubber, polyethylene, PVA.

c) Eye protection:

Protective goggles.

d) Skin 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	Liquid
Odour	Alcohol odour
Odour threshold	No data available
Colour	Colourless
Particle size	Not applicable (liquid)
Explosion limits	2 - 12 vol % 50 - 300 g/m ³
Flammability	Highly flammable liquid and vapour.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	> 82 °C
Flash point	12 °C
Evaporation rate	No data available
Relative vapour density	2.1
Vapour pressure	43 hPa ; 20 °C 295 hPa ; 50 °C
Solubility	water ; soluble
Relative density	0.8
Decomposition temperature	No data available
Auto-ignition temperature	No data available
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	800 kg/m ³
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SECTION 10: Stability and reactivity

10.1 Reactivity:

May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. No data available.

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

Violent to explosive reaction with (strong) oxidizers. Reacts exothermically with (some) metals. Prolonged storage/in large quantities: may form peroxides.

Reason for revision: ATP4

Publication date: 2011-05-03

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10.4 Conditions to avoid:

Keep away from naked flames/heat. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: keep naked flames/sparks away.

10.5 Incompatible materials:

Oxidizing agents, (strong) acids, (strong) bases, halogens.

10.6 Hazardous decomposition products:

Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

Acute toxicity

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	5840 mg/kg bw		Rat	Experimental value	
Dermal	LD50	Equivalent to OECD 402	16.4 ml/kg bw	24 h	Rabbit	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	>10000 ppm	6 h	Rat (male/female)	Experimental value	

titanium tetraisopropanolate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	7500 mg/kg bw		Rat (male)	Weight of evidence	
Dermal	LD50		12870 mg/kg bw		Rabbit	Read-across	
Inhalation (aerosol)	LC50		7780 mg/m ³ air	4 h	Rat (male)	Weight of evidence	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Highly irritating	OECD 405			Rabbit	Experimental value	Single treatment
Skin	Not irritating		4 h		Human	Experimental value	
Skin	Not irritating		4 h		Rabbit	Experimental value	

titanium tetraisopropanolate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Skin	Not irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Weight of evidence	

Classification is based on the relevant ingredients

Conclusion

Causes serious eye irritation.

Not classified as irritating to the skin

Respiratory or skin sensitisation

SURFACE ACTIVATOR

No (test)data on the mixture available

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propan-2-ol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406	3 weeks (6h/day, 1 day/week)	24: 48 hours	Guinea pig (male/female)	Experimental value	

titanium tetraisopropanolate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse (female)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

Specific target organ toxicity

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation (vapours)	NOAEC	OECD 451	5000 ppm	General	No effect	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	Dose level	OECD 403	5000 ppm	Central nervous system	Drowsiness, dizziness	6 h	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEL	OECD 413	5000 ppm			13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

titanium tetraisopropanolate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL		2200 mg/kg bw/day		No effect	2 weeks (5 days/week)	Rat (male)	Inconclusive, insufficient data
Inhalation (vapours)	Dose level	EPA TSCA consent order	5000 ppm	Central nervous system	Central nervous system depression	6 h	Rat (male/female)	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	5000 ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	5000 ppm		No effect	13 weeks (6h/day, 5 days/week)	Mouse (male/female)	Read-across

Classification is based on the relevant ingredients

Conclusion

May cause drowsiness or dizziness.

Mutagenicity (in vitro)

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (<i>S.typhimurium</i>)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value

titanium tetraisopropanolate

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (<i>S.typhimurium</i>)		Weight of evidence

Mutagenicity (in vivo)

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No (test)data on the mixture available

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propan-2-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 474		Mouse (male/female)		Experimental value

titanium tetraisopropanolate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	EPA OTS 798.5395		Mouse (male/female)		Read-across

Carcinogenicity

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Inhalation (vapours)	NOEL	Equivalent to OECD 451	5000 ppm	104 weeks (6h/day, 5 days/week)	Mouse (male/female)	Experimental value		No carcinogenic effect

titanium tetraisopropanolate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Inhalation (vapours)	NOEL	Equivalent to OECD 451	> 5000 ppm	78 weeks (6h/day, 5 days/week)	Mouse (male/female)	Read-across		No effect
Inhalation (vapours)	NOEL	Equivalent to OECD 451	> 5000 ppm	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Read-across		No effect

Reproductive toxicity

SURFACE ACTIVATOR

No (test)data on the mixture available

propan-2-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	596 mg/kg bw/day	1 month(s)	Rat	No effect	Foetus	Experimental value
						No effect	Foetus	
						No effect	Thymus	
Maternal toxicity	NOAEL	Equivalent to OECD 414	596 mg/kg bw/day	1 month(s)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEL	Equivalent to OECD 415	853 mg/kg bw/day	21-70 day(s)	Rat (male/female)	No effect		Experimental value

titanium tetraisopropanolate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	EPA OTS 798.4900	400 mg/kg bw/day	10 days (gestation, daily)	Rat (male/female)	No effect		Read-across
Maternal toxicity	NOAEL		400 mg/kg bw/day	10 days (gestation, daily)	Rat (female)	No effect		Read-across

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for reprotoxic or developmental toxicity

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

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No (test)data on the mixture available

Chronic effects from short and long-term exposure

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ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Skin rash/inflammation. Impaired memory. Cracking of the skin.

SECTION 12: Ecological information

12.1 Toxicity:

SURFACE ACTIVATOR

No (test) data on the mixture available

propan-2-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	9640 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity invertebrates	EC50	Other	13299 mg/l	48 h	Daphnia magna			Experimental value
	LC50	Equivalent to OECD 202	> 10000 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50	UBA	> 1000 mg/l	72 h	Scenedesmus subspicatus			Experimental value; Growth rate
Long-term toxicity aquatic invertebrates	EC0		141 mg/l	384 h	Daphnia magna			
Toxicity aquatic micro-organisms	EC50	ISO 8192	41676 mg/l	30 minutes	Bacteria			Experimental value; Activated sludge

titanium tetraisopropanolate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		4200 mg/l	96 h	Rasbora heteromorpha	Static system	Fresh water	Read-across
Acute toxicity invertebrates	EC50	OECD 202	590 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
	NOEC	OECD 202	440 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	>820 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
	EC50	OECD 201	400 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
	NOEC	OECD 201	201 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
	LOEC	OECD 201	97 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Biomass
Toxicity aquatic micro-organisms	Toxicity threshold	DIN 38412-8	1050 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Read-across

Judgement is based on the relevant ingredients of the mixture

Conclusion

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

12.2 Persistence and degradability:

propan-2-ol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301E: Modified OECD Screening Test	95 %	21 day(s)	Experimental value

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Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	84 - 89 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
			Calculated value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	<3 minutes		Experimental value

Conclusion

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Readily biodegradable in water

12.3 Bioaccumulative potential:

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

propan-2-ol

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		0.05	25 °C	Weight of evidence approach

titanium tetraisopropanolate

Log Kow

Method	Remark	Value	Temperature	Value determination
		1.03		Calculated

Conclusion

Does not contain bioaccumulative component(s)

12.4 Mobility in soil:

titanium tetraisopropanolate

(log) Koc

Parameter	Method	Value	Value determination
Koc	SRC PCKOCWIN v2.0	1.53	Read-across

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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Global warming potential (GWP)

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

Ozone-depleting potential (ODP)

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

Ground water

Ground water pollutant

propan-2-ol

Ground water

Ground water 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

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

20 01 29* (separately collected fractions (except 15 01): detergents containing dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

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. Do not discharge into surface water.

13.1.3 Packaging/Container

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

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

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Road (ADR)

14.1 UN number:

UN number	1219
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14.2 UN proper shipping name:

Proper shipping name	Isopropanol (isopropyl alcohol), mixture
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14.3 Transport hazard class(es):

Hazard identification number	33
Class	3
Classification code	F1

14.4 Packing group:

Packing group	II
Labels	3

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	601
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	1219
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14.2 UN proper shipping name:

Proper shipping name	Isopropanol (isopropyl alcohol), mixture
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14.3 Transport hazard class(es):

Hazard identification number	33
Class	3
Classification code	F1

14.4 Packing group:

Packing group	II
Labels	3

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	601
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	1219
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14.2 UN proper shipping name:

Proper shipping name	Isopropanol (isopropyl alcohol), mixture
----------------------	--

14.3 Transport hazard class(es):

Class	3
Classification code	F1

14.4 Packing group:

Packing group	II
Labels	3

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	601
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	1219
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14.2 UN proper shipping name:

Proper shipping name	Isopropanol (isopropyl alcohol), mixture
----------------------	--

14.3 Transport hazard class(es):

Class	3
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14.4 Packing group:

Packing group	II
Labels	3

14.5 Environmental hazards:

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	
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 73/78 and the IBC Code:

Annex II of MARPOL 73/78	Not applicable, based on available data
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Air (ICAO-TI/IATA-DGR)

14.1 UN number:

UN number	1219
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14.2 UN proper shipping name:

Proper shipping name	Isopropanol, mixture
----------------------	----------------------

14.3 Transport hazard class(es):

Class	3
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14.4 Packing group:

Packing group	II
Labels	3

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
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14.6 Special precautions for user:

Special provisions	A180
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	1 L

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
100 %	

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

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
propan-2-ol titanium tetraisopropanolate	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects. 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with 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 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 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

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		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 R65 or 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 R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
propan-2-ol titanium tetraisopropanolate	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 The Netherlands

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Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03
Waterbezwaarlijkheid	11

National legislation Germany

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WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
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propan-2-ol

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	2-Propanol; 200 ppm
MAK 8-Stunden-Mittelwert mg/m ³	2-Propanol; 500 mg/m ³
TA-Luft	5.2.5

titanium tetraisopropanolate

TA-Luft	5.2.5
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National legislation France

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No data available

National legislation Belgium

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No data available

Other relevant data

SURFACE ACTIVATOR

No data available

propan-2-ol

IARC - classification	3; Isopropanol
TLV - Carcinogen	2-propanol; A4

15.2 Chemical safety assessment:

No chemical safety assessment has been conducted.

SECTION 16: Other information

Full text of any R-phrases referred to under headings 2 and 3:

R10 Flammable
R36 Irritating to eyes
R67 Vapours may cause drowsiness and dizziness

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Full text of any H-statements referred to under headings 2 and 3:

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

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. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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