

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Gewebeimpraegnierung Fabric Impregnation

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

See definition of the substance or mixture.

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Skin Irrit.	2	H315-Causes skin irritation.
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
STOT SE	3	H336-May cause drowsiness or dizziness.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.
Aerosol	1	H222-Extremely flammable aerosol.
Aerosol	1	H229-Pressurised container: May burst if heated.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation



Danger

H315-Causes skin irritation. H336-May cause drowsiness or dizziness. H411-Toxic to aquatic life with long lasting effects. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

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. P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves.
 P312-Call a POISON CENTRE / doctor if you feel unwell.
 P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
 P501-Dispose of contents / container to an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.
 Caution! You must comply! Damage to health possible due to inhaling! Only use outdoors or in well-ventilated rooms!
 Spray only for a few seconds! Spray leather and textile products only outdoors and let them air well! Keep away from children!
 n-butyl acetate
 Isopropyl acetate
 Hydrocarbons, C10-C12, isoalkanes, <2% aromatics
 Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).
 In case of spreading near the ground, flashback to distance sources of ignition is possible.

SECTION 3: Composition/information on ingredients

Aerosol

3.1 Substances

n.a.

3.2 Mixtures

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
Registration number (REACH)	01-2119475515-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	927-510-4
CAS	---
content %	<25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
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GB

Page 3 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Registration number (REACH)	01-2119475514-35-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	921-024-6
CAS	---
content %	<25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	
Registration number (REACH)	01-2119471991-29-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	923-037-2
CAS	---
content %	10-20
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Ethanol	
Registration number (REACH)	01-2119457610-43-XXXX
Index	603-002-00-5
EINECS, ELINCS, NLP, REACH-IT List-No.	200-578-6
CAS	64-17-5
content %	10-20
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Specific Concentration Limits and ATE	Eye Irrit. 2, H319: >=50 %

n-butyl acetate	
Registration number (REACH)	01-2119485493-29-XXXX
Index	607-025-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	204-658-1
CAS	123-86-4
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 3, H226 STOT SE 3, H336

Isopropyl acetate	
Registration number (REACH)	01-2119537214-46-XXXX
Index	607-024-00-6
EINECS, ELINCS, NLP, REACH-IT List-No.	203-561-1
CAS	108-21-4
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
 The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 04.03.2024 / 0024

Replacing version dated / version: 24.05.2023 / 0023

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PDF print date: 08.03.2024

Gewebeimpraegnierung

Fabric Impregnation

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Typically no exposure pathway.

Rinse the mouth thoroughly with water.

Do not induce vomiting. Consult doctor immediately.

Danger of aspiration.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

The following may occur:

Irritation of the respiratory tract

Coughing

Headaches

Nausea

Effects/damages the central nervous system

Narcotic effect.

With long-term contact:

Dermatitis (skin inflammation)

Product removes fat.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Toxic gases

Danger of bursting (explosion) when heated

Explosive vapour/air or gas/air mixtures.

5.3 Advice for firefighters

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 04.03.2024 / 0024
Replacing version dated / version: 24.05.2023 / 0023
Valid from: 04.03.2024
PDF print date: 08.03.2024
Gewebeimpraegnierung
Fabric Impregnation

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

6.3 Methods and material for containment and cleaning up

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid inhalation of the vapours.
Keep away from sources of ignition - Do not smoke.
Take measures against electrostatic charging, if appropriate.
Do not use on hot surfaces.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Observe special storage conditions.
Observe special regulations for aerosols!
Do not store with oxidizing agents.
Keep protected from direct sunlight and temperatures over 50°C.
Store in a well ventilated place.
Store cool.

7.3 Specific end use(s)

No information available at present.

Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

GB

Page 6 of 26

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 04.03.2024 / 0024

Replacing version dated / version: 24.05.2023 / 0023

Valid from: 04.03.2024

PDF print date: 08.03.2024

Gewebeimpraegnung

Fabric Impregnation

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
800 mg/m³

Chemical Name	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
WEL-TWA: 800 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174) 	
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)	

Chemical Name	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
WEL-TWA: 800 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-187 S (551 174) 	
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)	

Chemical Name	Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	
WEL-TWA: 1200 mg/m ³	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-187 S (551 174) 	
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)	

Chemical Name	Ethanol	
WEL-TWA: 1000 ppm (1920 mg/m ³)	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Alcohol 25/a Ethanol (81 01 631) - Compur - KITA-104 SA (549 210) - DFG (D) (Loesungsmittelgemische), Methode Nr. 6 DFG (E) (Solvent mixtures) - 2013, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004) - DFG Meth. Nr. 2 (D) (Loesungsmittelgemische) - 2013 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004) - DFG Meth. Nr. 3 (D) (Loesungsmittelgemische) - 2013 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004) 	
BMGV: ---	Other information: ---	

Chemical Name	n-butyl acetate	
WEL-TWA: 150 ppm (724 mg/m ³) (WEL-TWA), 50 ppm (241 mg/m ³) (EU)	WEL-STEL: 200 ppm (966 mg/m ³) (WEL-STEL), 150 ppm (723 mg/m ³) (EU)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-138 U (548 857) - Compur - KITA-139 SB(C) (549 731) - NIOSH 1450 (ESTERS 1) - 2003 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - OSHA 1009 (n-Butyl Acetate Isobutyl Acetate sec-Butyl Acetate tert-Butyl Acetate) - 2007 	
BMGV: ---	Other information: ---	

Chemical Name	Isopropyl acetate	
WEL-TWA: ---	WEL-STEL: 200 ppm (849 mg/m ³)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-111 U (549 178) - Compur - KITA-139 SB(C) (549 731) - NIOSH 1454 (Isopropyl acetate) - 2003 - EU project BC/CEN/ENTR/000/2002-16 card 14-4 (2004) - NIOSH 1460 (ISOPROPYL ACETATE) - 2003 	
BMGV: ---	Other information: ---	

Chemical Name	Butane	
WEL-TWA: 600 ppm (1450 mg/m ³)	WEL-STEL: 750 ppm (1810 mg/m ³)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-221 SA (549 459) - OSHA PV2010 (n-Butane) - 1993 	
BMGV: ---	Other information: ---	

GB

GB

Page 7 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Chemical Name		Propane	
WEL-TWA: 1000 ppm (ACGIH)		WEL-STEL: ---	---
Monitoring procedures:	-	Compur - KITA-125 SA (549 954)	
	-	OSHA PV2077 (Propane) - 1990	
BMGV: ---		Other information: ---	

Chemical Name		Isobutane	
WEL-TWA: 1000 ppm (EX) (ACGIH)		WEL-STEL: ---	---
Monitoring procedures:	-	Compur - KITA-113 SB(C) (549 368)	
BMGV: ---		Other information: ---	

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Long term, systemic effects	DNEL	149	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	149	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	447	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	300	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2085	mg/m3	

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - dermal	Long term, systemic effects	DNEL	699	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	608	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	699	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	773	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2035	mg/m3	

Ethanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,96	mg/l	
	Environment - marine		PNEC	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	2,75	mg/l	
	Environment - sewage treatment plant		PNEC	580	mg/l	
	Environment - sediment, freshwater		PNEC	3,6	mg/kg dry weight	
	Environment - soil		PNEC	0,63	mg/kg dry weight	
	Environment - oral (animal feed)		PNEC	0,38	g/kg feed	
	Environment - sediment, marine		PNEC	2,9	mg/kg dry weight	

Page 8 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Consumer	Human - dermal	Short term, local effects	DNEL	950	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	114	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	206	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	950	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	343	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	950	mg/m ³	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1900	mg/m ³	

n-butyl acetate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,18	mg/l	
	Environment - marine		PNEC	0,018	mg/l	
	Environment - periodic release		PNEC	0,36	mg/l	
	Environment - sediment, freshwater		PNEC	0,981	mg/kg	
	Environment - sediment, marine		PNEC	0,0981	mg/kg	
	Environment - soil		PNEC	0,0903	mg/kg	
	Environment - sewage treatment plant		PNEC	35,6	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	3,4	mg/kg	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	300	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	35,7	mg/m ³	
Consumer	Human - inhalation	Short term, local effects	DNEL	300	mg/m ³	
Consumer	Human - inhalation	Long term, local effects	DNEL	35,7	mg/m ³	
Consumer	Human - dermal	Short term, systemic effects	DNEL	6	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	2	mg/kg bw/day	
Consumer	Human - oral	Short term, systemic effects	DNEL	2	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	600	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	300	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	7	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	11	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	600	mg/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	300	mg/m ³	

Isopropyl acetate

Page 9 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,22	mg/l	
	Environment - marine		PNEC	0,022	mg/l	
	Environment - soil		PNEC	0,35	mg/kg bw/d	
	Environment - sewage treatment plant		PNEC	190	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	26	mg/kg body weight/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	26	mg/kg body weight/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	252	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	420	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	43	mg/kg body weight/day	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
 | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
 | BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
 | Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE). |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
 Applies only if maximum permissible exposure values are listed here.
 Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
 These are specified by e.g. EN 14042.
 EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
 Tight fitting protective goggles with side protection (EN 166).

Page 10 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Skin protection - Hand protection:
 Chemical resistant protective gloves (EN ISO 374).
 If applicable
 Protective nitrile gloves (EN ISO 374).
 Protective gloves made of fluorocarbon rubber (EN ISO 374).
 Minimum layer thickness in mm:
 0,5
 Permeation time (penetration time) in minutes:
 >480
 Protective hand cream recommended.
 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
 The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
 Normally not necessary.
 If OES or MEL is exceeded.
 Filter A P2 (EN 14387), code colour brown, white
 At high concentrations:
 Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
 Not applicable

Additional information on hand protection - No tests have been performed.
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
 Selection of materials derived from glove manufacturer's indications.
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Colourless
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	n.a.
Flammability:	Does not apply to aerosols.
Lower explosion limit:	1 Vol-%
Upper explosion limit:	15 Vol-%
Flash point:	Does not apply to aerosols.
Auto-ignition temperature:	>200 °C
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	Does not apply to aerosols.
Solubility:	Not miscible
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	5600 hPa (20°C)
Density and/or relative density:	0,66 g/ml (20°C)
Relative vapour density:	Vapours heavier than air.
Particle characteristics:	Does not apply to aerosols.

9.2 Other information

Page 11 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Explosives: Product is not explosive. When using: development of explosive vapour/air mixture possible.
 Oxidising liquids: No
 Evaporation rate: n.a.
 Bulk density: n.a.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Heating, open flame, ignition sources
 Pressure increase will result in danger of bursting.

10.5 Incompatible materials

Avoid contact with oxidizing agents.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

Gewebeimpraegnierung Fabric Impregnation						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2800-3100	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>23,3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Aspiration hazard:						Yes

Page 12 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Symptoms:						diarrhoea, headaches, dizziness, nausea and vomiting.
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Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>25,2	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant (Analogous conclusion)
Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Analogous conclusion, No (inhalation and skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Analogous conclusion, Negative
Carcinogenicity:						Analogous conclusion, Negative
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Analogous conclusion, Negative
Specific target organ toxicity - single exposure (STOT-SE):						May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE):						Negative
Aspiration hazard:						Yes
Symptoms:						drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Not irritant (respiratory tract).

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	

Page 13 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Acute toxicity, by inhalation:	LC50	>5000	mg/m ³ /8h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative, Analogous conclusion
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Negative, Analogous conclusion
Aspiration hazard:						Yes

Ethanol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10470	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	51-124,7	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Carcinogenicity:	NOAEL	>3000	mg/kg	Rat	OECD 451 (Carcinogenicity Studies)	24 mon
Reproductive toxicity:	NOAEL	5200	mg/kg bw/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	

Page 14 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Symptoms:						respiratory distress, drowsiness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea

n-butyl acetate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10760-13100	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	
Acute toxicity, by dermal route:	LD50	>14112	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>21,1	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAEC	9640	mg/m3		OECD 416 (Two-generation Reproduction Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						Vapours may cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE):						Negative

Page 15 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Symptoms:						drowsiness, unconsciousness, headaches, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	500	ppm	Rat		

Isopropyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	6750	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>20000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	68-136	mg/l	Rat		
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit		Irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Aspiration hazard:						No
Symptoms:						lack of appetite, eyes, reddened, drowsiness, unconsciousness, cornea opacity, headaches, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.

Butane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Human being	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Aspiration hazard:						No

Page 16 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Symptoms:						ataxia, breathing difficulties, drowsiness, unconsciousness, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting.

Propane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male, Analogous conclusion
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEC	21,641	mg/l		OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Aspiration hazard:						No
Symptoms:						breathing difficulties, unconsciousness, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	7,214	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	LOAEL	21,641	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	

Isobutane

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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GB

Page 17 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Aspiration hazard:						No
Symptoms:						unconsciousness , frostbite, headaches, cramps, dizziness, nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	

11.2. Information on other hazards

Gewebeimpraegnierung Fabric Impregnation						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

Ethanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Other information:						Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders)., There is no sign that this syndrome is also caused by dermal or inhalative absorption., Experiences on persons.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Page 18 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

Gewebeimpraegnierung Fabric Impregnation							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							Product is slightly volatile.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							According to the recipe, contains no AOX.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>13,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	28d	1,534	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	29	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	6,3	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	98	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	11,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to fish:	NOEC/NOEL	28d	2,045	mg/l	Oncorhynchus mykiss	QSAR	

Page 19 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

12.1. Toxicity to daphnia:	EL50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,17	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EL50	72h	30-100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	81	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Analogous conclusion, Readily biodegradable
12.2. Persistence and degradability:		28d	98	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL0	96h	1000	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOELR	28d	0,192	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EL0	48h	1000	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,025	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EL0	72h	1000	mg/l	Pseudokirchneriella subcapitata		
12.2. Persistence and degradability:		28d	31,3	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily but inherent biodegradable.
Toxicity to bacteria:	EC50		1 - 10	mg/l			
Water solubility:							Insoluble

Ethanol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	13000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	

Page 20 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

12.1. Toxicity to fish:	NOEC/NOEL	120h	250	mg/l	Brachydanio rerio	OECD 212 (Fish, Short-term Toxicity Test on Embryo and Sac-fry Stages)	
12.1. Toxicity to daphnia:	EC50	48h	5414	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	10d	9,6	mg/l	Ceriodaphnia spec.		References
12.1. Toxicity to algae:	EC50	72h	275	mg/l	Chlorella vulgaris	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	97	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		(-0,35) - (-0,32)				Bioaccumulation is unlikely (LogPow < 1).
12.3. Bioaccumulative potential:	BCF		0,66 - 3,2				
12.4. Mobility in soil:	H (Henry)		0,000138				
12.4. Mobility in soil:	Koc		1,0				Highestimated
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	IC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion
Other organisms:	NOEC/NOEL		280	mg/l	Lemna gibba	OECD 201 (Alga, Growth Inhibition Test)	
Other information:	COD		1,9	g/g			
Other information:	BOD5		1	g/g			

n-butyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	18	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	44	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	23	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	397	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	200	mg/l	Desmodesmus subspicatus		

Page 21 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

12.2. Persistence and degradability:		28d	98	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		1,78 - 2,3				Low
12.3. Bioaccumulative potential:	BCF		15,3				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10		959	mg/l	Pseudomonas putida		

Isopropyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	48h	265	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	24h	4150	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	IC5	8d	165	mg/l	Scenedesmus quadricauda		
12.3. Bioaccumulative potential:	Log Pow		1,03				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC5	16h	190	mg/l	Pseudomonas putida		
Other information:	COD		1670	mg/g			
Water solubility:			18,9	g/l			

Butane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	24,11	mg/l		QSAR	
12.1. Toxicity to daphnia:	LC50	48h	14,22	mg/l		QSAR	
12.3. Bioaccumulative potential:	Log Pow		2,98				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Propane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative potential:	Log Pow		2,28				A notable biological accumulation potential is not to be expected (LogPow 1-3).

GB

Page 22 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
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Isobutane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	27,98	mg/l			
12.1. Toxicity to algae:	EC50	96h	7,71	mg/l			
12.2. Persistence and degradability:							Readily biodegradable
12.3. Bioaccumulative potential:							A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

16 05 04 gases in pressure containers (including halons) containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Take full aerosol cans to problem waste collection.

Take emptied aerosol cans to valuable material collection.

For contaminated packing material

Pay attention to local and national official regulations.

Recommendation:

Do not perforate, cut up or weld uncleaned container.

15 01 04 metallic packaging

15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1950	 
14.2. UN proper shipping name:	UN 1950 AEROSOLS	
14.3. Transport hazard class(es):	2.1	
14.4. Packing group:	-	
14.5. Environmental hazards:	environmentally hazardous	
Tunnel restriction code:	D	
Classification code:	5F	
LQ:	1 L	
Transport category:	2	

Transport by sea (IMDG-code)

14.1. UN number or ID number:	1950	 
14.2. UN proper shipping name:	UN 1950 AEROSOLS (HYDROCARBONS, C6-C7, HYDROCARBONS, C10-C12)	

GB

Page 23 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

14.3. Transport hazard class(es): 2.1
 14.4. Packing group: -
 14.5. Environmental hazards: environmentally hazardous
 Marine Pollutant: Yes
 EmS: F-D, S-U

Transport by air (IATA)

14.1. UN number or ID number: 1950
 14.2. UN proper shipping name: UN 1950 Aerosols, flammable
 14.3. Transport hazard class(es): 2.1
 14.4. Packing group: -
 14.5. Environmental hazards: Not applicable



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
 Minimum amount regulations have not been taken into account.
 Danger code and packing code on request.
 Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
 Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
 Regulation (EC) No 1907/2006, Annex XVII
 Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
 Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500
P3a	11.1	150 (netto)	500 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 2 - This product contains the substances listed below:

Entry Nr	Dangerous substances	Notes to Annex I	Qualifying quantity (tonnes) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) for the application of - Upper-tier requirements
18	Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas	19	50	200

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 99,28 %

Observe incident regulations.

National requirements/regulations on safety and health protection must be applied when using work equipment.

Page 24 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2
 Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Skin Irrit. 2, H315	Classification according to calculation procedure.
Asp. Tox. 1, H304	Classification according to calculation procedure.
STOT SE 3, H336	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.

Skin Irrit. — Skin irritation
 Asp. Tox. — Aspiration hazard
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Aerosol — Aerosols
 Flam. Liq. — Flammable liquid
 Eye Irrit. — Eye irritation

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
 Guidelines for the preparation of safety data sheets as amended (ECHA).
 Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
 Safety data sheets for the constituent substances.
 ECHA Homepage - Information about chemicals.
 GESTIS Substance Database (Germany).
 German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
 EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
 National Lists of Occupational Exposure Limits for each country as amended.
 Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

Page 25 of 26
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.03.2024 / 0024
 Replacing version dated / version: 24.05.2023 / 0023
 Valid from: 04.03.2024
 PDF print date: 08.03.2024
 Gewebeimpraegnierung
 Fabric Impregnation

acc., acc. to according, according to
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ASTM ASTM International (American Society for Testing and Materials)
 ATE Acute Toxicity Estimate
 BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF Bioconcentration factor
 BSEF The International Bromine Council
 CAS Chemical Abstracts Service
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EbCx, EyCx, EBLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
 EC European Community
 ECHA European Chemicals Agency
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances
 ELINCS European List of Notified Chemical Substances
 EN European Norms
 EPA United States Environmental Protection Agency (United States of America)
 ErCx, EµCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
 etc. et cetera
 EU European Union
 EVAL Ethylene-vinyl alcohol copolymer
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 Koc Adsorption coefficient of organic carbon in the soil
 Kow octanol-water partition coefficient
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC (Code) International Bulk Chemical (Code)
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 IUPAC International Union for Pure Applied Chemistry
 LC50 Lethal Concentration to 50 % of a test population
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
 Log Kow, Log Pow Logarithm of octanol-water partition coefficient
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 mg/kg bw mg/kg body weight
 mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
 mg/kg dw mg/kg dry weight
 mg/kg wwt mg/kg wet weight
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute for Occupational Safety and Health (USA)
 NLP No-longer-Polymer
 NOEC, NOEL No Observed Effect Concentration/Level

Page 26 of 26
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 04.03.2024 / 0024
Replacing version dated / version: 24.05.2023 / 0023
Valid from: 04.03.2024
PDF print date: 08.03.2024
Gewebeimpraegnierung
Fabric Impregnation

OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:

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