

SAFETY DATA SHEET

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

NOVA STRUCTURE SPRAY

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

1.1. Product identifier

Product name : NOVA STRUCTURE SPRAY
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

Anti-corrosion agent

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

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International
Industrielaan 5B

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.
Repr.	category 2	H361d: Suspected of damaging the unborn child.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.2. Label elements



Contains: ethyl acetate; butanone; toluene.

Signal word Danger

H-statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H361d Suspected of damaging the unborn child.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

P-statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

NOVA STRUCTURE SPRAY

P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P280 Wear protective gloves, protective clothing and eye protection/face protection.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.

Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
ethyl acetate 01-2119475103-46	141-78-6 205-500-4	25%<C<50%	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
butanone 01-2119457290-43	78-93-3 201-159-0	10%<C<25%	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
toluene 01-2119471310-51	108-88-3 203-625-9	1%<C<5%	Flam. Liq. 2; H225 Repr. 2; H361d Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336	(1)(2)(10)	Constituent
methanol 01-2119433307-44	67-56-1 200-659-6	C<1%	Flam. Liq. 2; H225 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT SE 1; H370	(1)(2)(8)(10)	Constituent
propane 01-2119486944-21	74-98-6 200-827-9	10%<C<25%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
butane 01-2119474691-32	106-97-8 203-448-7	5%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
isobutane 01-2119485395-27	75-28-5 200-857-2	5%<C<10%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

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

(2) Substance with a Community workplace exposure limit

(8) Specific concentration limits, see heading 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

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

After skin contact:

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

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. 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:

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2 / 22

NOVA STRUCTURE SPRAY

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

After skin contact:

ON CONTINUOUS EXPOSURE/CONTACT: Red skin. Cracking of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Alcohol-resistant foam. Carbon dioxide. BC powder. Sand/earth.

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. Pressurised container: May burst if heated.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion.

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

Dam up the liquid spill.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

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

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

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

7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

NOVA STRUCTURE SPRAY

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

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

EU

Butanone	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	200 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	600 mg/m ³
	Short time value (Indicative occupational exposure limit value)	300 ppm
	Short time value (Indicative occupational exposure limit value)	900 mg/m ³
Methanol	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	200 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	260 mg/m ³
Toluene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	192 mg/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	384 mg/m ³

Belgium

2-Butanone	Time-weighted average exposure limit 8 h	200 ppm
	Time-weighted average exposure limit 8 h	600 mg/m ³
	Short time value	300 ppm
	Short time value	900 mg/m ³
Acétate d'éthyle	Time-weighted average exposure limit 8 h	400 ppm
	Time-weighted average exposure limit 8 h	1461 mg/m ³
Alcool méthylique	Time-weighted average exposure limit 8 h	200 ppm
	Time-weighted average exposure limit 8 h	266 mg/m ³
	Short time value	250 ppm
	Short time value	333 mg/m ³
Hydrocarbures aliphatiques sous forme gazeuse : (Alcanes C1-C4)	Time-weighted average exposure limit 8 h	1000 ppm
Toluène	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	77 mg/m ³
	Short time value	100 ppm
	Short time value	384 mg/m ³

The Netherlands

2-Butanon	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	197 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	590 mg/m ³
	Short time value (Public occupational exposure limit value)	300 ppm
	Short time value (Public occupational exposure limit value)	900 mg/m ³
Ethylacetaat	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	150 ppm
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	550 mg/m ³
	Short time value (Private occupational exposure limit value)	300 ppm
	Short time value (Private occupational exposure limit value)	1100 mg/m ³
Methanol	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	100 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	133 mg/m ³
n-Butaan	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	592 ppm
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	1430 mg/m ³
Tolueen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	39 ppm

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4 / 22

NOVA STRUCTURE SPRAY

Tolueen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	150 mg/m ³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	384 mg/m ³

France

Acétate d'éthyle	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	400 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1400 mg/m ³
Methanol	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	200 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	260 mg/m ³
	Short time value (VL: Valeur non réglementaire indicative)	1000 ppm
	Short time value (VL: Valeur non réglementaire indicative)	1300 mg/m ³
Méthyléthylcétone	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	200 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	600 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	300 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	900 mg/m ³
n-Butane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	800 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1900 mg/m ³
Toluène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	76.8 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	384 mg/m ³

Germany

Butan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m ³
Butanon	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	600 mg/m ³
Ethylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	400 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1500 mg/m ³
Isobutan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m ³
Methanol	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	270 mg/m ³
Propan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1800 mg/m ³
Toluol	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	190 mg/m ³

UK

Butan-2-one (methyl ethyl ketone)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	200 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	300 ppm
	Short time value (Workplace exposure limit (EH40/2005))	899 mg/m ³
Butane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1450 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	750 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1810 mg/m ³
Ethyl acetate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	200 ppm
	Short time value (Workplace exposure limit (EH40/2005))	400 ppm
Methanol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	200 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	266 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	250 ppm

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Product number: 48507

5 / 22

NOVA STRUCTURE SPRAY

Methanol	Short time value (Workplace exposure limit (EH40/2005))	333 mg/m ³
Toluene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	191 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	384 mg/m ³

USA (TLV-ACGIH)

Butane, all isomers	Short time value (TLV - Adopted Value)	1000 ppm
Ethyl acetate	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	400 ppm
Methanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm
	Short time value (TLV - Adopted Value)	250 ppm
Methyl ethyl ketone (MEK)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm
	Short time value (TLV - Adopted Value)	300 ppm
Toluene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm

b) National biological limit values

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

Germany

Butanon (2-Butanon; Ethylmethylketon) (Butanon (2-Butanon))	Urin: expositionsende, bzw. schichtende	2 mg/l	05/2015 DFG
Methanol (Methanol)	Urin: bei langzeitexposition: nach mehreren vorangegangenen schichten expositionsende, bzw. schichtende	30 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Toluol (o-Kresol (nach Hydrolyse))	Urin: bei langzeitexposition: nach mehreren vorangegangenen schichten expositionsende, bzw. schichtende	1,5 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Toluol (Toluol)	Vollblut: expositionsende, bzw. schichtende	600 µg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

Methanol (Methanol)	Urine: end of shift	15 mg/L	
Methyl ethyl ketone (MEK)	urine: end of shift	2 mg/L	
Toluene (o-Cresol)	Urine: end of shift	0,3 mg/g creatinine	
Toluene (Toluene)	Blood: prior to last shift of workweek	0,02 mg/L	
Toluene (Toluene)	urine: end of shift	0,03 mg/L	

8.1.2 Sampling methods

If applicable and available it will be listed below.

2-Butanone (MEK) (Methyl ethyl ketone)	NIOSH	2500
2-Butanone (Methyl ethyl ketone)	OSHA	84
2-Butanone (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
2-Butanone (Volatile Organic compounds)	NIOSH	2549
2-Butanone	OSHA	1004
2-Butanone	OSHA	13
ACETONE and METHYL ETHYL KETONE in urine	NIOSH	8319
Ethyl acetate (Volatile Organic compounds)	NIOSH	2549
Ethyl Acetate	NIOSH	1457
Ethyl Acetate	OSHA	7
MEK	NIOSH	8002
Methanol (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Methanol (Volatile Organic compounds)	NIOSH	2549
Methyl Alcohol (Methanol)	NIOSH	2000
Methyl Alcohol	OSHA	91
Methyl Ethyl Ketone (ketones I)	NIOSH	2555
Methyl Ethyl Ketone	OSHA	16
Toluene (Hydrocarbons, aromatic)	NIOSH	1501
Toluene (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Toluene (Volatile Organic compounds)	NIOSH	2549
Toluene in blood	NIOSH	8007
Toluene	NIOSH	4000
Toluene	NIOSH	8002
Toluene	NIOSH	95-117
Toluene	OSHA	111

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.

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6 / 22

NOVA STRUCTURE SPRAY

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

ethyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	1468 mg/m ³	
	Acute local effects inhalation	1468 mg/m ³	
	Long-term systemic effects dermal	63 mg/kg bw/day	
	Long-term systemic effects inhalation	734 mg/m ³	
	Long-term local effects inhalation	734 mg/m ³	

butanone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	600 mg/m ³	
	Long-term systemic effects dermal	1161 mg/kg bw/day	

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	192 mg/m ³	
	Acute systemic effects inhalation	384 mg/m ³	
	Long-term local effects inhalation	192 mg/m ³	
	Acute local effects inhalation	384 mg/m ³	
	Long-term systemic effects dermal	384 mg/kg bw/day	

methanol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	260 mg/m ³	
	Acute systemic effects inhalation	260 mg/m ³	
	Long-term local effects inhalation	260 mg/m ³	
	Acute local effects inhalation	260 mg/m ³	
	Long-term systemic effects dermal	40 mg/kg bw/day	
	Acute systemic effects dermal	40 mg/kg bw/day	

DNEL/DMEL - General population

ethyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	734 mg/m ³	
	Acute local effects inhalation	734 mg/m ³	
	Long-term systemic effects dermal	37 mg/kg bw/day	
	Long-term systemic effects inhalation	367 mg/m ³	
	Long-term systemic effects oral	4.5 mg/kg bw/day	
	Long-term local effects inhalation	367 mg/m ³	

butanone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	106 mg/m ³	
	Long-term systemic effects dermal	412 mg/kg bw/day	
	Long-term systemic effects oral	31 mg/kg bw/day	

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	56.5 mg/m ³	
	Acute systemic effects inhalation	226 mg/m ³	
	Long-term local effects inhalation	56.5 mg/m ³	
	Acute local effects inhalation	226 mg/m ³	
	Long-term systemic effects dermal	226 mg/kg bw/day	
	Long-term systemic effects oral	8.13 mg/kg bw/day	

methanol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	50 mg/m ³	
	Acute systemic effects inhalation	50 mg/m ³	
	Long-term local effects inhalation	50 mg/m ³	
	Acute local effects inhalation	50 mg/m ³	
	Long-term systemic effects dermal	8 mg/kg bw/day	
	Acute systemic effects dermal	8 mg/kg bw/day	

PNEC

ethyl acetate

Compartments	Value	Remark
Fresh water	0.26 mg/l	
Marine water	0.026 mg/l	
Fresh water sediment	1.25 mg/kg sediment dw	
Marine water sediment	0.125 mg/kg sediment dw	
Soil	0.24 mg/kg soil dw	
STP	650 mg/l	

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7 / 22

NOVA STRUCTURE SPRAY

butanone

Compartments	Value	Remark
Fresh water	55.8 mg/l	
Marine water	55.8 mg/l	
Aqua (intermittent releases)	55.8 mg/l	
STP	709 mg/l	
Fresh water sediment	284.74 mg/kg sediment dw	
Marine water sediment	284.7 mg/kg sediment dw	
Soil	22.5 mg/kg soil dw	
Food	1000 mg/kg food	

toluene

Compartments	Value	Remark
Fresh water	0.68 mg/l	
Marine water	0.68 mg/l	
Aqua (intermittent releases)	0.68 mg/l	
STP	13.61 mg/l	
Fresh water sediment	16.39 mg/kg sediment dw	
Marine water sediment	16.39 mg/kg sediment dw	
Soil	2.89 mg/kg soil dw	

methanol

Compartments	Value	Remark
Fresh water	20.8 mg/l	
Marine water	2.08 mg/l	
Aqua (intermittent releases)	1540 mg/l	
STP	100 mg/l	
Fresh water sediment	77 mg/kg sediment dw	
Marine water sediment	7.7 mg/kg sediment dw	
Soil	3.18 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

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

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

a) Respiratory protection:

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

b) Hand protection:

Gloves.

Materials	Breakthrough time	Thickness
butyl rubber	>240 minutes	0.12 mm
nitrile rubber	>240 minutes	0.12 mm
viton	>240 minutes	0.12 mm

- materials (good resistance)

Butyl rubber, viton, nitrile rubber.

c) Eye protection:

Protective goggles.

d) Skin protection:

Head/neck protection. Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Aerosol
Odour	Characteristic odour
Odour threshold	No data available
Colour	Black
Particle size	No data available
Explosion limits	1.5 - 11.5 vol %
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available

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8 / 22

NOVA STRUCTURE SPRAY

Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Relative vapour density	> 2
Vapour pressure	8300 hPa ; 20 °C
Solubility	water ; insoluble
Relative density	0.80 ; 20 °C ; Liquid
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	795 kg/m ³ ; 20 °C ; Liquid
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

NOVA STRUCTURE SPRAY

No (test) data on the mixture available

ethyl acetate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	4934 mg/kg bw		Rabbit (male/female)	Experimental value	
Dermal	LD50	24 hour cuff method	> 20000 mg/kg bw		Rabbit (male)	Experimental value	
Inhalation	LC50	Other	> 22.5 mg/l	6 h	Rat (male/female)	Experimental value	

butanone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 423	2193 mg/kg bw		Rat (male/female)	Read-across	
Dermal	LD50	Equivalent to OECD 402	> 10 ml/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)						Data waiving	

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral (one dose)	LD50	Equivalent to OECD 401	5580 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Other	> 5000 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	25.7 mg/l air	4 h	Rat (male)	Experimental value	

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9 / 22

NOVA STRUCTURE SPRAY

methanol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral			category 3			Annex VI	
Oral	LD50	BASF test	1187 mg/kg bw - 2769 mg/kg bw		Rat (male/female)	Weight of evidence	
Dermal			category 3			Annex VI	
Dermal	LD50		17100 mg/kg		Rabbit	Literature study	
Inhalation (vapours)			category 3			Annex VI	
Unknown	LC50	BASF test	128.2 mg/l air	4 h	Rat (male/female)	Weight of evidence	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

NOVA STRUCTURE SPRAY

No (test) data on the mixture available

ethyl acetate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Eye	Not irritating	Human	4 h		Human	Experimental value	
Eye	Irritating; category 2					Annex VI	
Dermal	Slightly irritating	Equivalent to OECD 404		24; 48; 72 hours	Rabbit	Experimental value	
Dermal	Not irritating	Patch test	4 week(s)		Human	Experimental value	
Inhalation	Slightly irritating	Human	4 h		Human	Experimental value	

butanone

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	Equivalent to OECD 405		24; 72 hours	Rabbit	Experimental value	Single exposure
Skin	Not irritating	OECD 404	4 h	4; 24; 48; 72 hours	Rabbit	Read-across	

toluene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Skin	Irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

methanol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	BASF test		1; 24 hours	Rabbit	Experimental value	
Skin	Not irritating	BASF test	20 h	48; 72 hours	Rabbit	Experimental value	

Classification is based on the relevant ingredients

Conclusion

Irritating to the eyes

Not classified as irritating to the skin

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

NOVA STRUCTURE SPRAY

No (test) data on the mixture available

ethyl acetate

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

butanone

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

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10 / 22

NOVA STRUCTURE SPRAY

toluene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406	72 h	24; 48 hours	Guinea pig (female)	Experimental value	

methanol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406		24; 48; 72 hours	Guinea pig (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

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

ethyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	Equivalent to OECD 410	900 mg/kg bw/day		No effect	90 day(s) - 92 day(s)	Rat (male/female)	Experimental value
Inhalation	LOEC	Equivalent to OECD 413	350 ppm		Nasal irritation	94 day(s)	Rat (male/female)	Experimental value

butanone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	5041 ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)			STOT SE cat.3	Central nervous system	Drowsiness, dizziness			Annex VI

toluene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	Equivalent to OECD 408	625 mg/kg bw/day		No effect	13 weeks (daily, 5 days/week)	Mouse (male/female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	600 ppm	Respiratory tract	Erosion/degeneration nasal epithelia	103 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEC	Human observation	50 ppm	Central nervous system	No effect	4.5 h	Human (male)	Experimental value

methanol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral		Incident			Visual disturbances to permanent blindness		Human	Literature study
Oral	Dose level		500 mg/kg - 1000 mg/kg	Eyelid	Impairment of the nervous system	1.5 day(s) - 6 day(s)	Monkey (male)	Experimental value
Dermal		Incident			Visual disturbances to permanent blindness		Human	Literature study
Inhalation		Incident			Visual disturbances to permanent blindness		Human	Literature study
Inhalation (vapours)	Dose level	Human observation	0.26 mg/l air	Central nervous system	No effect	4 h	Human	Weight of evidence

Classification is based on the relevant ingredients

Conclusion

May cause drowsiness or dizziness.

Not classified for subchronic toxicity

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11 / 22

NOVA STRUCTURE SPRAY

Mutagenicity (in vitro)

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

ethyl acetate

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value

butanone

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 473	Rat liver cells	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

toluene

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

methanol

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster lung fibroblasts	No effect	Experimental value

Mutagenicity (in vivo)

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

ethyl acetate

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

butanone

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

toluene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Other		Rat		Experimental value
Negative	Equivalent to OECD 478	8 weeks (6h/day, 5 days/week)	Mouse (male)		Experimental value

methanol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474	5 days (6h/day)	Mouse (male)		Experimental value

Carcinogenicity

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	1200 ppm	103 weeks (6h/day, 5 days/week)	Rat (male/female)	No effect		Experimental value
Dermal	NOAEL	Carcinogenic toxicity study	0.05 ml (twice a week)		Mouse (male)	No effect		Experimental value

methanol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	≥ 1.3 mg/l air	24 months (daily, 20h/day)	Mouse (male/female)	No effect		Experimental value
Oral	LOAEL		1800 mg/kg bw/day - 2100 mg/kg bw/day		Mouse (male/female)	Carcinogenicity		Inconclusive, insufficient data

Reproductive toxicity

NOVA STRUCTURE SPRAY

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12 / 22

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

ethyl acetate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	73300 mg/m ³	1 days (gestation, daily) - 19 days (gestation, daily)	Rat	Histopathological changes	General	Read-across
	NOAEL	Equivalent to OECD 414	> 3600 mg/kg bw/day	8 days (gestation, daily) - 14 days (gestation, daily)	Mouse	No effect		Read-across
Effects on fertility	NOAEL	Equivalent to OECD 416	26400 mg/kg bw/day	18 week(s)	Mouse (male/female)	No effect	General	Read-across

butanone

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	1002 ppm	10 days (7h/day)	Rat	No effect	Foetus	Experimental value
Maternal toxicity	NOAEC	Equivalent to OECD 414	1002 ppm	10 days (7h/day)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEL	Equivalent to OECD 416	1644 mg/kg bw/day - 1771 mg/kg bw/day		Rat (male/female)	No effect		Read-across

toluene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	EPA OTS 798.4350	750 ppm	20 days (6h/day)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEC	EPA OTS 798.4350	750 ppm	20 days (6h/day)	Rat (female)	Maternal toxicity		Experimental value
Effects on fertility	NOAEC (P)	OECD 416	2000 ppm	11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect		Experimental value
	NOAEC (F1)	OECD 416	500 ppm	11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect		Experimental value
	NOAEC (F2)	OECD 416	500 ppm	11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect		Experimental value

methanol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	1.33 mg/kg bw/day	11 days (gestation, daily)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEC	Equivalent to OECD 414	1.33 mg/kg bw/day	11 days (gestation, daily)	Rat (female)	No effect		Weight of evidence
Effects on fertility	NOAEC (P)		2.39 mg/l air	355 days (2.5h/day)	Monkey (female)	No effect		Weight of evidence

Classification is based on the relevant ingredients

Conclusion CMR

Suspected of damaging the unborn child.

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

NOVA STRUCTURE SPRAY

No (test)data on the mixture available

ethyl acetate

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
NOAEC	Equivalent to OECD 424	750 ppm		neurotoxic effects	99 day(s) - 100 day (s)	Rat (male/female)	Experimental value

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13 / 22

NOVA STRUCTURE SPRAY

butanone

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
	Equivalent to OECD 404		Skin	Skin dryness or cracking			Read-across

methanol

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
LDLO		4000 mg/kg bw		Mortality		Monkey (male/female)	Experimental value

Classification is based on the relevant ingredients

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

NOVA STRUCTURE SPRAY

No effects known.

SECTION 12: Ecological information

12.1. Toxicity

NOVA STRUCTURE SPRAY

No (test) data on the mixture available

ethyl acetate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	US EPA	230 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	Other	165 mg/l	48 h	Daphnia magna		Fresh water	Experimental value
Toxicity algae and other aquatic plants	LC50	DIN 38412-9	5600 mg/l	48 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
Acute toxicity other aquatic organisms	LC50	Other	180 mg/l	48 h	Xenopus laevis		Fresh water	Experimental value
Long-term toxicity fish	NOEC	Equivalent to OECD 212	< 9.65 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Long-term toxicity aquatic invertebrates	NOEC	Other	2.4 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	Toxicity threshold	Equivalent to DIN 38412/8	650 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value

butanone

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2993 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value; GLP
Acute toxicity invertebrates	EC50	OECD 202	308 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	1972 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC0	DIN 38412-8	1150 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value

toluene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		5.5 mg/l	96 h	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value
Acute toxicity invertebrates	LC50	US EPA	3.78 mg/l	48 h	Ceriodaphnia dubia		Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50		12.5 mg/l	72 h	Selenastrum capricornutum			Literature study
Long-term toxicity fish	NOEC		1.39 mg/l	40 day(s)	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value; Growth rate
Long-term toxicity aquatic invertebrates	NOEC	US EPA	0.74 mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		84 mg/l	24 h	Nitrosomonas	Static system	Fresh water	Experimental value

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14 / 22

NOVA STRUCTURE SPRAY

methanol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA 660/3 - 75/009	15400 mg/l	96 h	Lepomis macrochirus	Flow-through system	Fresh water	Experimental value; Lethal
	LC50		10800 mg/l	96 h	Salmo gairdneri			Literature study
Acute toxicity invertebrates	EC50	DIN 38412-11	> 10000 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Lethal
	EC50	OECD 202	18260 mg/l	96 h	Daphnia magna	Semi-static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50	OECD 201	22000 mg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Acute toxicity other aquatic organisms	EC50		71700 mg/l	3 minutes	Tubifex tubifex	Static system	Fresh water	Experimental value; Locomotor effect
Long-term toxicity fish	EC50		14536 mg/l	200 h	Oryzias latipes	Static system	Fresh water	Experimental value
Long-term toxicity aquatic invertebrates	NOEC		208 mg/l	2 day(s)	Daphnia magna			QSAR; Reproduction
Toxicity aquatic micro-organisms	IC50	OECD 209	> 1000 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity soil macro-organisms	LC50	OECD 207	> 1 mg/cm ²	48 h	Eisenia fetida	Experimental value
Toxicity terrestrial plants	EC50		60 mol/l	7 day(s)	Triticum aestivum	Weight of evidence

Judgement of the mixture is based on the relevant ingredients

Conclusion

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

12.2. Persistence and degradability

ethyl acetate

Biodegradation water

Method	Value	Duration	Value determination
Other	69 %	20 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
Other	75 h		Experimental value

butanone

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D: Closed Bottle Test	98 %; GLP	28 day(s)	Experimental value

toluene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	100 %	14 day(s)	Experimental value

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	2.6 day(s)		Literature study

methanol

Biodegradation water

Method	Value	Duration	Value determination
Other	95 % - 97 %; Oxygen consumption	20 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	17.2 day(s)		Experimental value

Biodegradation soil

Method	Value	Duration	Value determination
Other	46.3 % - 53.4 %	5 day(s)	Experimental value

Conclusion

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

NOVA STRUCTURE SPRAY

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

NOVA STRUCTURE SPRAY

ethyl acetate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		30	3 day(s)	Leuciscus idus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.68	25 °C	Test data

butanone

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		0.3	40 °C	Experimental value

toluene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		90	72 h	Leuciscus idus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		2.73	20 °C	Experimental value

methanol

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		< 10	72 h	Leuciscus idus	Experimental value
		4.5	72 h	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		-0.77		Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

ethyl acetate

(log) Koc

Parameter	Method	Value	Value determination
			No data available

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	51.3 %	0 %	0.27 %	13.3 %	35.3 %	QSAR
Mackay level I	98.47 %	0 %	0 %	0.26 %	1.27 %	QSAR

butanone

(log) Koc

Parameter	Method	Value	Value determination
log Koc		1.53	Calculated value

methanol

(log) Koc

Parameter	Method	Value	Value determination
Koc	PCKOCWIN v1.66	1	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.461 Pa.m ³ /mol		25 °C		

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	73.3 %		0.02 %	11.1 %	15.6 %	Calculated value
Mackay level I	12.5 %	0 %	0 %	0 %	87.5 %	Calculated value

Conclusion

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

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

NOVA STRUCTURE SPRAY

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

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

Ozone-depleting potential (ODP)

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16 / 22

NOVA STRUCTURE SPRAY

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

ethyl acetate

Ground water

Ground water pollutant

butanone

Ground water

Ground water pollutant

toluene

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

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.

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

08 01 11* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances).

Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Recycle/reuse. Specific treatment. 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. Should not be landfilled with household waste. Do not discharge into drains or the environment.

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

Road (ADR)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols
----------------------	----------

14.3. Transport hazard class(es)

Hazard identification number	
Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no
--	----

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	1950
-----------	------

14.2. UN proper shipping name

Proper shipping name	Aerosols
----------------------	----------

14.3. Transport hazard class(es)

Hazard identification number	23
Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

NOVA STRUCTURE SPRAY

14.5. Environmental hazards

Environmentally hazardous substance mark	no
--	----

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number

UN number	1950
-----------	------

14.2. UN proper shipping name

Proper shipping name	Aerosols
----------------------	----------

14.3. Transport hazard class(es)

Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no
--	----

14.6. Special precautions for user

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols
----------------------	----------

14.3. Transport hazard class(es)

Class	2.1
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14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

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

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

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

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

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

Class	2.1
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14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

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Product number: 48507

18 / 22

NOVA STRUCTURE SPRAY

Special provisions	A145
Special provisions	A167
Special provisions	A802
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
86.80 %	
690.3 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
Toluene	Skin
Methanol	Skin

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
<ul style="list-style-type: none"> · ethyl acetate · butanone · toluene · methanol 	<p>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:</p> <p>(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;</p> <p>(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;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>1. Shall not be used in:</p> <ul style="list-style-type: none"> — 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. <p>2. Articles not complying with paragraph 1 shall not be placed on the market.</p> <p>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:</p> <ul style="list-style-type: none"> — 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. <p>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).</p> <p>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:</p> <p>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";</p> <p>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";</p> <p>c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p> <p>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.</p> <p>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.'</p>
<ul style="list-style-type: none"> · ethyl acetate · butanone · toluene · methanol 	<p>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.</p>	<p>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:</p> <ul style="list-style-type: none"> — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopie" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. <p>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:</p> <p>"For professional users only".</p> <p>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.</p> <p>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.</p>

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Publication date: 2009-08-18

Date of revision: 2016-04-07

Revision number: 0400

Product number: 48507

19 / 22

NOVA STRUCTURE SPRAY

- toluene	Toluene	Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.
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National legislation Belgium

NOVA STRUCTURE SPRAY

No data available

toluene

Résorption peau	D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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methanol

Résorption peau	D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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National legislation The Netherlands

NOVA STRUCTURE SPRAY

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	1

butanone

Huidopname (wettelijk)	H
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toluene

SZW - List of reprotoxic substances (development)	Suspected of damaging the unborn child.
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methanol

SZW - List of reprotoxic substances (development)	May damage the unborn child.
Huidopname (wettelijk)	H

National legislation France

NOVA STRUCTURE SPRAY

No data available

butanone

VME - Risque de pénétration percutanée	PP
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toluene

VME - Risque de pénétration percutanée	PP
--	----

methanol

VME - Risque de pénétration percutanée	PP
--	----

National legislation Germany

NOVA STRUCTURE SPRAY

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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ethyl acetate

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Ethylacetat; 400 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Ethylacetat; 1500 mg/m ³
TA-Luft	5.2.5; I
Risiko der Fruchtschädigung	Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

butanone

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	2-Butanon; 200 ppm
MAK 8-Stunden-Mittelwert mg/m ³	2-Butanon; 600 mg/m ³
TA-Luft	5.2.5
Risiko der Fruchtschädigung	Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	H; Hautresorptiv

Reason for revision: 2.2

Publication date: 2009-08-18

Date of revision: 2016-04-07

Revision number: 0400

Product number: 48507

20 / 22

NOVA STRUCTURE SPRAY

toluene

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Toluol; 50 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Toluol; 190 mg/m ³
TA-Luft	5.2.5; I
Risiko der Fruchtschädigung	Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	H; Hautresorptiv

methanol

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Methanol; 200 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Methanol; 270 mg/m ³
TA-Luft	5.2.5; I
Risiko der Fruchtschädigung	Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	H; Hautresorptiv

National legislation United Kingdom

NOVA STRUCTURE SPRAY

No data available

butanone

Skin absorption	Sk
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toluene

Skin absorption	Sk
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methanol

Skin absorption	Sk
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Other relevant data

NOVA STRUCTURE SPRAY

No data available

toluene

TLV - Carcinogen	Toluene; A4
IARC - classification	3; Toluene

methanol

Skin absorption	Skin; Danger of cutaneous absorption
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15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

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

- H220 Extremely flammable gas.
- H222 Extremely flammable aerosol.
- H225 Highly flammable liquid and vapour.
- H229 Pressurised container: May burst if heated.
- H280 Contains gas under pressure; may explode if heated.
- H301 Toxic if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- H370 Causes damage to organs (central nervous system, eyes (blindness)).
- H373 May cause damage to organs (central nervous system) through prolonged or repeated exposure if inhaled.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

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

Specific concentration limits CLP

methanol	C ≥ 10 %	STOT SE 1; H370	CLP Annex VI (ATP 0)
	3 % ≤ C < 10 %	STOT SE 2; H371	CLP Annex VI (ATP 0)

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,

Reason for revision: 2.2

Publication date: 2009-08-18

Date of revision: 2016-04-07

Revision number: 0400

Product number: 48507

21 / 22

NOVA STRUCTURE SPRAY

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.