# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878



# **NOVATIO AL-FIX AKTIVATOR**

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

#### 1.1. Product identifier

Product name : NOVATIO AL-FIX AKTIVATOR 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

Adhesive: activator

#### 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

**2** +32 14 25 76 40

**₼** +32 14 22 02 66

info@novatio.be

\*NOVATIO is a registered trademark of Novatech International N.V.

#### Manufacturer of the product

Novatech International N.V.

Industrielaan 5B

B-2250 Olen

**2** +32 14 85 97 37

**4** +32 14 85 97 38

info@novatech.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

	assumed as danger out determine to the different of negatiation (20) fro 1272/2000		
Class	Category	Hazard statements	
Aerosol	category 1	H222: Extremely flammable aerosol.	
Aerosol	category 1	H229: Pressurised container: May burst if heated.	
Eye Irrit.	category 2	H319: Causes serious eye irritation.	
STOT SE	category 3	H336: May cause drowsiness or dizziness.	

#### 2.2. Label elements





Contains: acetone.

Signal word	Danger
H-statements	
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
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.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear eye protection.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)

Technische Schoolstraat 43 A, B-2440 Geel

http://www.big.be

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Publication date: 2020-12-03

878-16239-002-6

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P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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	lRemark	M-factors and ATE
acetone 01-2119471330-49	67-64-1 200-662-2		Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	(1)(2)(10)	Constituent	
N,N-dimethyl-p-toluidine	99-97-8 202-805-4		Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT RE 2; H373 Aquatic Chronic 3; H412	(1)(10)	Constituent	
dimethyl ether 01-2119472128-37	115-10-6 204-065-8		Flam. Gas 1A; H220 Press. Gas - Liquefied gas;	(1)(2)(10)	Propellant	

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

# **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

#### General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

#### After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

#### After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

#### After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

#### After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

#### 4.2.1 Acute symptoms

After inhalation:

Dizziness. Drowsiness.

After skin contact:

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry 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

### ${\bf 5.1.1 \ Suitable \ extinguishing \ media:}$

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Small fire: Water, Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

Major fire: Quantities of water.

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

Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours. Pressurised container: May burst if heated.

#### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

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

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

Gloves (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

#### 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 (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See heading 8.2

#### 6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent spreading in sewers.

#### 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. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards. Avoid prolonged and repeated contact with skin.

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

#### 7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Meet the legal requirements. Keep container in a well-ventilated place. Fireproof storeroom. Keep out of direct sunlight.

#### 7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents.

#### 7.2.3 Suitable packaging material:

No data available

#### 7.2.4 Non suitable packaging material:

No data available

#### 7.3. Specific end use(s)

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

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.1.1 Occupational exposure

#### a) Occupational exposure limit values

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

E	U

	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	500 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1210 mg/m³
,	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1000 ppm

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Dimethylether		Time-weighted average ex exposure limit value)	posure limit 8 h (Indicati	ve occupational	1920 mg/m <sup>3</sup>
talat		exposure illine raide)			
Acétone		Time-weighted average ex	rnosuro limit 9 h		500 ppm
Acetone		Time-weighted average ex			1210 mg/m <sup>3</sup>
		Short time value	posure mine o n		1000 ppm
		Short time value			2420 mg/m <sup>3</sup>
Oxyde de diméthyle		Time-weighted average ex	posure limit 8 h		1000 ppm
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Time-weighted average ex			1920 mg/m <sup>3</sup>
The Netherlands		•			
Aceton		Time-weighted average ex	posure limit 8 h (Public o	occupational exposure	501 ppm
		limit value)	l: :: 0   /p   l:		4240 / 3
		Time-weighted average ex limit value)	posure limit 8 h (Public d	occupational exposure	1210 mg/m <sup>3</sup>
		Short time value (Public or	ccupational exposure lim	it value)	1002 ppm
		Short time value (Public or	ccupational exposure lim	it value)	2420 mg/m <sup>3</sup>
Dimethylether		Time-weighted average ex	posure limit 8 h (Public o	occupational exposure	496 ppm
		limit value) Time-weighted average ex	posure limit 8 h (Public o	occupational exposure	950 mg/m <sup>3</sup>
		limit value)	. ,		
		Short time value (Public or		· · · · · · · · · · · · · · · · · · ·	783 ppm 1500 mg/m <sup>3</sup>
		Short time value (Public or	ccupational exposure lim	it value)	T200 III8/W
rance Acétone		Time weighted sure	rnacura limit 0 h /VDC V	Nous réglement-in-	E00 page
rcerone		Time-weighted average ex contraignante)	φυsure iimit δ ñ (VKC: Va	neur regierrientaire	500 ppm
		Time-weighted average ex contraignante)	posure limit 8 h (VRC: Va	aleur réglementaire	1210 mg/m <sup>3</sup>
		Short time value (VRC: Val	eur réglementaire contra	aignante)	1000 ppm
		Short time value (VRC: Val	-		2420 mg/m <sup>3</sup>
Oxyde de diméthyle		Time-weighted average ex	posure limit 8 h (VRI: Va	leur réglementaire	1000 ppm
		indicative) Time-weighted average ex	posure limit 8 h (VRI: Va	leur réglementaire	1920 mg/m <sup>3</sup>
		indicative)	, , , , , ,		,, ,
Germany					
Aceton		Time-weighted average ex	posure limit 8 h (TRGS 9	00)	500 ppm
		Time-weighted average ex	posure limit 8 h (TRGS 9	00)	1200 mg/m <sup>3</sup>
Dimethylether		Time-weighted average exposure limit 8 h (TRGS 900)			1000 ppm
		Time-weighted average ex	posure limit 8 h (TRGS 9	00)	1900 mg/m <sup>3</sup>
JK					
Acetone		Time-weighted average ex (EH40/2005))	posure limit 8 h (Workpl	ace exposure limit	500 ppm
		Time-weighted average ex	posure limit 8 h (Workpl	ace exposure limit	1210 mg/m³
		(EH40/2005))		(2005))	4500
		Short time value (Workpla			1500 ppm
Nanathul ather		Short time value (Workpla			3620 mg/m³
Dimethyl ether		Time-weighted average ex (EH40/2005))	posure iimit & ñ (Workpl	ace exposure limit	400 ppm
		Time-weighted average ex	posure limit 8 h (Workpl	ace exposure limit	766 mg/m <sup>3</sup>
		(EH40/2005)) Short time value (Workpla	ce exposure limit (FH40)	(2005))	500 ppm
		Short time value (Workpla			958 mg/m <sup>3</sup>
JSA (TLV-ACGIH)		, , , ,		••	
Acetone		Time-weighted average ex	posure limit 8 h (TLV - A	dopted Value)	250 ppm
		Short time value (TLV - Ad			500 ppm
b) National biological limit values f limit values are applicable and av Germany	ailable these will be listed b	•	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		p.p.
Aceton (Aceton)	Urin: expositionsend	le, bzw. schichtende	80 mg/l		
JSA (BEI-ACGIH)					
Acetone (Acetone)	Urine: end of shift		25 mg/L	Nonspecific	
Methemoglobin inducers	Blood: during or end	of shift	1,5 % of	Background, Nonspec	cific, Semi-
(Methemoglobin)	DI- 1 1 1 1	-£-1-:£	hemoglobin	quantative	
Methemoglobin inducers Blood: during or end (Methemoglobin)		OI SNITT	5 % of hemoglobin	bin Background, Nonspecific - Intende changes	
(INICTITION TO BIODITI)					

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Product name	Test	Number
Acetone (ketones 1)	NIOSH	1300
Acetone (ketones I)	NIOSH	2555
Acetone (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Acetone (Volatile Organic compounds)	NIOSH	2549
ACETONE and METHYL ETHYL KETONE in urine	NIOSH	8319
Acetone	OSHA	69
N,N-Dimethyl p-Toluidine (Amines, Aromatic)	NIOSH	2002

# 8.1.3 Applicable limit values when using the substance or mixture as intended If limit values are applicable and available these will be listed below.

#### 8.1.4 Threshold values

#### **DNEL/DMEL - Workers**

<u>acetone</u>

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	1210 mg/m³	
	Acute local effects inhalation	2420 mg/m³	
	Long-term systemic effects dermal	186 mg/kg bw/day	

N,N-dimethyl-p-toluidine

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	1.224 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	0.694 mg/kg bw/day	

dimethyl ether

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	1894 mg/m³	

#### **DNEL/DMEL - General population**

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	200 mg/m³	
	Long-term systemic effects dermal	62 mg/kg bw/day	
	Long-term systemic effects oral	62 mg/kg bw/day	

N,N-dimethyl-p-toluidine

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	0.302 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	0.347 mg/kg bw/day	
	Long-term systemic effects oral	0.174 mg/kg bw/day	

dimethyl ether

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	471 mg/m³	

PNEC acetone

Compartments	Value	Remark
Fresh water	10.6 mg/l	
Marine water	1.06 mg/l	
Fresh water (intermittent releases)	21 mg/l	
STP	100 mg/l	
Fresh water sediment	30.4 mg/kg sediment dw	
Marine water sediment	3.04 mg/kg sediment dw	
Soil	29.5 mg/kg soil dw	
N,N-dimethyl-p-toluidine		

Compartments	Value	Remark
Fresh water	0.014 mg/l	
Marine water	0.001 mg/l	
Fresh water (intermittent releases)	0.137 mg/l	
STP	1.36 mg/l	
Fresh water sediment	48.245 mg/kg sediment dw	
Marine water sediment	48.245 mg/kg sediment dw	
Soil	20.365 mg/kg soil dw	
dimethyl ether	,	•

Compartments	Value	Remark
Fresh water	0.155 mg/l	
Fresh water (intermittent releases)	1.549 mg/l	
Marine water	0.016 mg/l	
STP	160 mg/l	
Fresh water sediment	0.681 mg/kg sediment dw	
Marine water sediment	0.069 mg/kg sediment dw	
Soil	0.045 mg/kg soil dw	

8.1.5 Control banding
If applicable and available it will be listed below.

#### 8.2. Exposure controls

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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. Take precautions against electrostatic charges. 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 normal hygiene standards. Avoid prolonged and repeated contact with skin. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

	Measured breakthrough time	Thickness	Protection index	Remark
butyl rubber	> 240 minutes	0.5 mm	Class 5	

#### c) Eye protection:

Protective goggles (EN 166).

#### d) Skin protection:

Protective clothing (EN 14605 or EN 13034). Head/neck protection.

#### 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

Aerosol
Acetone odour
No data available in the literature
Colourless
Clear
Not applicable (aerosol)
No data available in the literature
Extremely flammable aerosol.
Not applicable (mixture)
Not applicable (aerosol)
Not applicable (aerosol)
Not applicable (aerosol)
No data available in the literature
No data available in the literature
No data available in the literature
Water ; insoluble
0.70 ; 20 °C ; Liquid
703 kg/m³ ; 20 °C ; Liquid
No data available in the literature
Not applicable (aerosol)
Not applicable (aerosol)
Not applicable (aerosol)

#### 9.2. Other information

Evaporation rate	No data available in the literature
Explosive properties	Not classified
Oxidising properties	Not classified

# SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No data available.

#### 10.4. Conditions to avoid

#### **Precautionary measures**

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

#### 10.5. Incompatible materials

Oxidizing agents.

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#### 10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours.

# SECTION 11: Toxicological information

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

#### 11.1.1 Test results

#### Acute toxicity

#### **NOVATIO AL-FIX AKTIVATOR**

No (test)data on the mixture available Judgement is based on the relevant ingredients

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50		5800 mg/kg		Rat (female)	Experimental value	
Dermal	LD50		> 15800 mg/kg bw	24 h	Rabbit (male)	Weight of evidence	
Inhalation (vapours)	LC50		76 mg/l	4 h	Rat (female)	Weight of evidence	
					(male)		

N,N-dimethyl-p-toluidine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	OECD 401	1650 mg/kg bw		Rat (male /	Experimental value	
					female)		
Oral			category 3			Annex VI	
Dermal	LD50	OECD 402	> 2000 mg/kg bw		Rabbit (male /	Experimental value	
					female)		
Dermal			category 3			Annex VI	
Inhalation (aerosol)	LC50		1.4 mg/l	4 h	Rat	Experimental value	
Inhalation			category 3			Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test  $\underline{\text{dimethyl ether}}$ 

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral						Data waiving	
Dermal						Data waiving	
Inhalation (gases)	LC50		164000 ppm	4 h	Rat (male)	Experimental value	

As the substance is a gas, inhalation is the most likely route of exposure

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

Classification is based on the relevant ingredients

<u>acetone</u>

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Irritating	OECD 405	24 h	24; 48; 72 hours		l '	Single treatment with rinsing
Skin	Not irritating		3 day(s)	24; 48; 72 hrs; 4 days		Weight of evidence	
Inhalation	Slightly irritating	Human observation study	20 minutes		Human	Literature	

N,N-dimethyl-p-toluidine

Route of expos	ure Result	Method	Exposure time	Time point	Species	Value	Remark
						determination	
Eye	Not irritating	OECD 405	1 h	24; 48; 72 hours		Experimental value	
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours		Experimental value	

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dimethyl ether

Route of exposure	Result	Method	Exposure time	Time point	 Value determination	Remark
Eye					Data waiving	
Skin					Data waiving	

The liquid form can cause frostbites, typical for all liquefied gases

#### Conclusion

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Not classified as irritating to the eyes

#### Respiratory or skin sensitisation

#### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

Judgement is based on the relevant ingredients

cetone

Route of exposure	Result	Method	 Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Guinea pig maximisation test		Guinea pig (female)	Experimental value	
Skin	Not sensitizing	Human observation		Human	Experimental value	

N,N-dimethyl-p-toluidine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing				Rabbit (male / female)	QSAR	

dimethyl ether

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin						Data waiving	

The study on skin sensitisation does not need to be conducted as the substance is a gas

#### Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

#### Specific target organ toxicity

#### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

Classification is based on the relevant ingredients  $\underline{acetone}$ 

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 408	4.86 mg/kg bw/day - 5.95 mg/kg bw/day		No effect	13 week(s)	Mouse (male / female)	Experimental value
Oral (drinking water)	LOAEL	Equivalent to OECD 408	11.3 mg/kg bw/day	Liver	Histopatholog Y		Mouse (female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Subchronic toxicity test	19000 ppm		No effect	8 week(s)	Rat (male)	Experimental value
Inhalation (vapours)	Dose level	Human observation study	361 ppm	Central nervous system	neurotoxic effects	2 day(s)	Human	Epidemiological study

N,N-dimethyl-p-toluidine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value
								determination
Oral (stomach tube)	LOAEL		6 mg/kg bw/day	Female reproductive organ	'	105 weeks (5 days / week)	Rat (female)	Experimental value
Oral (stomach tube)	LOAEL		62.5 mg/kg	Various organs		14 weeks (5 days / week)	Rat (male / female)	Experimental value
Dermal			STOT RE cat.2					Annex VI
Dermal								Data waiving
Inhalation (vapours)	LOEL		67.28 mg/kg bw/day		Body weight reduction		Rat (male / female)	QSAR

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dimethyl ether

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time		Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)		Equivalent to OECD 452	47106 mg/m <sup>3</sup>			2 year(s) (6h / day, 5 days / week)	` '	Experimental value

As the substance is a gas, inhalation is the most likely route of exposure

Method

#### Conclusion

May cause drowsiness or dizziness. Not classified for subchronic toxicity

#### Mutagenicity (in vitro)

#### **NOVATIO AL-FIX AKTIVATOR**

No (test)data on the mixture available

Judgement is based on the relevant ingredients

acetone Result

	Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
N,N	-dimethyl-p-toluidine					
	Result	Method	Test substrate	Effect	Value determination	Remark
			Test substrate  Bacteria (S.typhimurium)		Value determination  Experimental value	Remark

Effect

Value determination Remark

Test substrate

u	<del>cuty cute</del>									
	Result	Method	Test substrate	Effect	Value determination	Remark				
	Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value					
	Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes	No effect	Experimental value					

#### Mutagenicity (in vivo)

#### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

Judgement is based on the relevant ingredients

<u>acetone</u>

	Result	Method	Exposure time	Test substrate	Organ	Value determination
	Negative (Oral (drinking water))	Micronucleus test	13 week(s)	Mouse (male / female)		Literature
dim	ethyl ether					

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Inhalation (gases))	Equivalent to OECD	3 day(s) - 14 day(s)	Drosophila melanogaster		Experimental value
	477		(male)		

#### Conclusion

Not classified for mutagenic or genotoxic toxicity

#### Carcinogenicity

#### **NOVATIO AL-FIX AKTIVATOR**

No (test)data on the mixture available

Judgement is based on the relevant ingredients

<u>acetone</u>

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOEL	Carcinogenic toxicity study	79 mg	51 weeks (3 times / week)	Mouse (female)	No carcinogenic effect		Literature

dimethyl ether

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
exposure								
Inhalation	NOAEL	Equivalent to	2.5 %	2 year(s) (6h / day, 5	Rat (male /	No carcinogenic		Experimental value
(vapours)		OECD 453		days / week)	female)	effect		

### Conclusion

Not classified for carcinogenicity

#### Reproductive toxicity

#### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

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Judgement is based on the relevant ingredients

acetone

	Parameter	Method	Value	Exposure time	Species	Effect	1- 0-	Value determination
Developmental toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect	Foetus	Experimental value
	LOAEC	Equivalent to OECD 414	11000 mg/kg bw/day	14 days (gestation, daily)	Rat	Fetotoxicity	Foetus	Experimental value
Maternal toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect		Experimental value
	LOAEC	Equivalent to OECD 414	11000 ppm	14 days (gestation, daily)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL		900 mg/kg bw/day	13 week(s)	Rat (male)	No effect		Literature

N,N-dimethyl-p-toluidine

	Parameter	Method	Value	Exposure time	Species	Effect	- 0-	Value determination
Effects on fertility	LOAEL (F2)		72.98 mg/kg		Rat (male /			QSAR
			bw/day		female)			

dimethyl ether

	Parameter	Method	Value	Exposure time	Species	Effect	- 0-	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEL	Equivalent to OECD 414	40000 ppm	10 days (6h / day)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	NOAEL	Equivalent to OECD 414	5000 ppm	10 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEL	Investigation reproductive capacity		2 year(s) (6h / day, 5 days / week)	Rat (male / female)	No effect		Experimental value

#### Conclusion

Not classified for reprotoxic or developmental toxicity

#### **Toxicity other effects**

#### NOVATIO AL-FIX AKTIVATOR

<u>acetone</u>

Parameter	Method	Value	Organ	Effect	Exposure time	 Value determination
			Skin	Skin dryness or cracking		Literature study Skin

#### Conclusion

Repeated exposure may cause skin dryness or cracking.

#### Chronic effects from short and long-term exposure

NOVATIO AL-FIX AKTIVATOR

No effects known.

### 11.2. Information on other hazards

No evidence of endocrine disrupting properties

# SECTION 12: Ecological information

# 12.1. Toxicity

#### NOVATIO AL-FIX AKTIVATOR

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

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	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	6210 mg/l - 8120 mg/l	96 h	Pimephales promelas	Flow- through system	Fresh water	Experimental value; Measured concentration
Acute toxicity crustacea	LC50		8800 mg/l	48 h	Daphnia pulex	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	NOEC		530 mg/l		Algae		Fresh water	
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	2212 mg/l	28 day(s)	Daphnia magna	Flow- through system	Fresh water	Experimental value

#### N,N-dimethyl-p-toluidine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		46 mg/l	96 h	Pimephales promelas		Fresh water	Experimental value; Lethal
Acute toxicity crustacea	LC50	ECOSAR	15.26 mg/l	48 h	Daphnia magna			QSAR
Toxicity algae and other aquatic plants	EC50		24.3 mg/l	72 h	Pseudokirchneri ella subcapitata	Flow- through system	Fresh water	QSAR
Long-term toxicity fish	LC50	ECOSAR	24.89 mg/l	14 day(s)				QSAR
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro- organisms	EC50		42.86 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR

dimethyl ether

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	NEN 6504	> 4100 mg/l	96 h	Poecilia reticulata	Semi-static system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50	NEN 6501	> 4400 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Lethal
Toxicity algae and other aquatic plants	EC50	ECOSAR v1.00	154.9 mg/l	96 h	Algae			QSAR
Toxicity aquatic micro- organisms	EC10		> 1600 mg/l		Pseudomonas putida	Static system	Fresh water	Literature study; Respiration

#### Conclusion

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

# 12.2. Persistence and degradability

<u>acetone</u>

**Biodegradation water** 

		Duration	Value determination
OECD 301B 90.9 %	Ó	28 day(s)	Experimental value

### N,N-dimethyl-p-toluidine

#### Biodegradation water

	Method	Value	Duration	Value determination					
	EPA OPPTS 835.3210	50 %	38 day(s)	Calculated value					
din	dimethyl ether								

# Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	5 %; Oxygen consumption	28 day(s)	Experimental value

Half-life soil (t1/2 soil)

Method	Primary degradation/mineralisation	Value determination
		Not applicable (gas)

#### Conclusion

Water

Contains non readily biodegradable component(s)

#### 12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

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#### Log Kow

Method	Remark	Value	Temperature	Value determination
		-0.23		Test data

#### N,N-dimethyl-p-toluidine

#### **BCF** fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	EPA OTS 797.1520	33		Pisces	Calculated value

#### Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107			35 ℃	Experimental value

#### dimethyl ether

#### Log Kow

Method	Remark	Value	Temperature	Value determination
		0.10		Experimental value

#### Conclusion

Does not contain bioaccumulative component(s)

#### 12.4. Mobility in soil

acetone

#### (log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	0.374 - 0.988	Calculated value

#### N,N-dimethyl-p-toluidine

#### (log) Koc

٠.	<del></del>			
F	Parameter	Method	Value	Value determination
I	og Koc	SRC PCKOCWIN v2.0	2.1	Calculated value

#### dimethyl ether

#### Percent distribution

Method	Fraction air	 Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	99.5 %	0 %	0.04 %	0.43 %	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. Endocrine disrupting properties

No evidence of endocrine disrupting properties

#### 12.7. Other adverse effects

### NOVATIO AL-FIX AKTIVATOR

#### Greenhouse gases

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

#### Ozone-depleting potential (ODP)

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

#### Groundwater

Groundwater pollutant

<u>acetone</u>

#### Groundwater

Groundwater pollutant

## N,N-dimethyl-p-toluidine

#### Groundwater

Groundwater pollutant

# SECTION 13: Disposal considerations

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

#### 13.1. Waste treatment methods

## 13.1.1 Provisions relating to waste

#### **European Union**

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

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

#### 13.1.2 Disposal methods

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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. Dispose of at authorized waste collection point.

#### 13.1.3 Packaging/Container

#### **European Union**

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

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

# **SECTION 14: Transport information**

	(ADR)	
14.	1. UN number	1,000
	UN number	1950
14.	2. UN proper shipping name	A   -
	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 (		
14.	1. UN number	1050
	UN number	1950
14.	2. UN proper shipping name	A I -
	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
14.	5. Environmental hazards	
	Environmentally hazardous substance mark	no
14.	6. Special precautions for user	T
	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)
	d 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
1./	4. Packing group	
14.	Packing group	
		2.1
1.4	Labels  E. Environmental hazards	
14.	5. Environmental hazards Environmentally hazardous substance mark	lno.
1.4	,	no
14.	6. Special precautions for user	190
	Special provisions	120

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NOVATIO AL-FIX AKTIVATOR			
Special provisions	327		
Special provisions	344		
Special provisions	625		

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

#### Sea (IMDG/IMSBC)

- ( , ,			
14.1. UN number			
UN number	1950		
14.2. UN proper shipping name			
Proper shipping name	aerosols		
14.3. Transport hazard class(es)			
Class	2.1		
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	190		
Special provisions	277		
Special provisions	327		
Special provisions	344		
Special provisions	381		
Special provisions	63		
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. Maritime transport in bulk according to IMO instruments			
Annex II of MARPOL 73/78	Not applicable		

#### Air (ICAO-TI/IATA-DGR)

14.1. UN number		
UN number	1950	
14.2. UN proper shipping name		
Proper shipping name	Aerosols, flammable	
14.3. Transport hazard class(es)		
Class	2.1	
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	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 <u>European legislation:</u>

VOC content Directive 2010/75/EU

VOC content	Remark
99.8 %	
701.8 g/l	

#### REACH Annex XVII - Restriction

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

	Designation of the substance, of the group of	Conditions of restriction
	substances or of the mixture	
· acetone	Liquid substances or mixtures fulfilling the	1. Shall not be used in:
· N,N-dimethyl-p-toluidine	criteria for any of the following hazard classes	— ornamental articles intended to produce light or colour effects by means of different
	or categories set out in Annex I to Regulation	phases, for example in ornamental lamps and ashtrays,
	(EC) No 1272/2008:	— tricks and jokes,
	(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8	— games for one or more participants, or any article intended to be used as such, even with
	types A and B, 2.9, 2.10, 2.12, 2.13 categories	ornamental aspects,
	1 and 2, 2.14 categories 1 and 2, 2.15 types A	2. Articles not complying with paragraph 1 shall not be placed on the market.
I		1

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	to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:  — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304,  4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).  5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:  a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";  b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";  c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.  6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public.  7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils
- acetone - dimethyl ether	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:  — metallic glitter intended mainly for decoration,  — artificial snow and frost,  — "whoopee" cushions,  — silly string aerosols,  — imitation excrement,  — horns for parties,  — decorative flakes and foams,  — artificial cobwebs,  — stink bombs.  2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:  "For professional users only".  3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.  4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

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No data available

# National legislation The Netherlands NOVATIO AL-FIX AKTIVATOR

Waterbezwaarlijkheid B (4); Algemene Beoordelingsmethodiek (ABM)	
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NOVATIO AL-FIX AKTIVATOR

No data available

# National legislation Germany

NOVATIO AL-FIX AKTIVATOR		
WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017	
<u>acetone</u>		
TA-Luft	5.2.5	
TRGS900 - Risiko der	Aceton; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen	
Fruchtschädigung	Grenzwertes nicht befürchtet zu werden	
N,N-dimethyl-p-toluidine		
TA-Luft	5.2.5/I	
dimethyl ether		

# NOVATIO AL-FIX AKTIVATOR

5.2.5

No data available

Other relevant data NOVATIO AL-FIX AKTIVATOR

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No data available

acetone

	<del>doctoric</del>	
	TLV - Carcinogen	Acetone; A4
Ν	N,N-dimethyl-p-toluidine	
	IARC - classification	2B; Dimethyl-p-toluidine

#### 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

#### SECTION 16: Other information

#### Full text of any H- and EUH-statements referred to under heading 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.

H311 Toxic in contact with skin.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs (reproductive organs) through prolonged or repeated exposure if swallowed.

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

(\*) INTERNAL CLASSIFICATION BY BIG

ADI Acceptable daily intake

AOEL Acceptable operator exposure level

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

DMEL Derived Minimal Effect Level
DNEL Derived No Effect Level
EC50 Effect Concentration 50 %

ErC50 EC50 in terms of reduction of growth rate

LC50 Lethal Concentration 50 %

LD50 Lethal Dose 50 %

NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration

OECD Organisation for Economic Co-operation and Development

PBT Persistent, Bioaccumulative & Toxic
PNEC Predicted No Effect Concentration

STP Sludge Treatment Process vPvB very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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