

SAFETY DATA SHEET

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

NFO-230

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

1.1. Product identifier

Product name : NFO-230
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

Professional use
Fuel
Fuel: additive

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 N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
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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

Class	Category	Hazard statements
Asp. Tox.	category 1	H304: May be fatal if swallowed and enters airways.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements



Contains: hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics; hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics.

Signal word Danger

H-statements

H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.

P-statements

P273 Avoid release to the environment.
P331 Do NOT induce vomiting.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P391 Collect spillage.
P405 Store locked up.

Supplemental information

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)
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EUH066

Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No List No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics 01-2119457273-39	918-481-9	60% <C<80%	Asp. Tox. 1; H304 EUH066	(1)(10)	Constituent	
2-ethylhexyl nitrate 01-2119539586-27	27247-96-7 248-363-6	10% <C<15%	Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH044 EUH066	(1)(10)	Constituent	M: 1 (Acute, ECHA (registration dossier)) M: 1 (Chronic, ECHA (registration dossier))
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics 01-2119456620-43	926-141-6	5%<C<10%	Asp. Tox. 1; H304 EUH066	(1)(10)	Constituent	
2-ethylhexan-1-ol 01-2119487289-20	104-76-7 203-234-3	C≤1%	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(2)(10)	Constituent	

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

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

Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

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 (lukewarm) 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:

No effects known.

After skin contact:

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

After eye contact:

No effects known.

After ingestion:

Risk of aspiration pneumonia.

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.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Use water moderately and if possible collect or contain it. Take account of environmentally hazardous firefighting water.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). 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

No naked flames. Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert 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 section 13.

SECTION 7: Handling and storage

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

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Avoid prolonged and repeated contact with skin. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Meet the legal requirements. Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Keep only in the original container. Keep container tightly closed.

7.2.2 Keep away from:

Heat sources, oxidizing agents, reducing agents, (strong) acids, (strong) bases.

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.

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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.

Client-specific limit values

Dearom. Mineral spirits 140 - 220	Time-weighted average exposure limit 8 h (EU HSPA)	1050 mg/m ³
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EU

2-ethylhexan-1-ol	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	5.4 mg/m ³

Belgium

2-Éthylhexan-1-ol	Time-weighted average exposure limit 8 h	1 ppm
	Time-weighted average exposure limit 8 h	5.4 mg/m ³

The Netherlands

2-Ethylhexaan-1-ol	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	1 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	5.4 mg/m ³

France

2-Ethylhexan-1-ol	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	1 ppm
	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	5.4 mg/m ³

Germany

2-Ethylhexan-1-ol	<i>Summe aus Dampf und Aerosolen.</i>	
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Austria

2-Ethyl-1-hexanol	Tagesmittelwert (MAK)	1 ppm
	Tagesmittelwert (MAK)	5.4 mg/m ³
	Kurzzeitwert 5(Mow) 8x (MAK)	2 ppm
	Kurzzeitwert 5(Mow) 8x (MAK)	10.8 mg/m ³

UK

2-ethylhexan-1-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5.4 mg/m ³

USA (TLV-ACGIH)

2-Ethyl-1-hexanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5 ppm
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b) National biological limit values

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

8.1.2 Sampling methods

If applicable and available it will be listed below.

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

2-ethylhexyl nitrate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.35 mg/m ³	
	Long-term systemic effects dermal	1 mg/kg bw/day	
	Long-term local effects dermal	44 µg/cm ²	

2-ethylhexan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	12.8 mg/m ³	
	Long-term local effects inhalation	53.2 mg/m ³	
	Acute local effects inhalation	53.2 mg/m ³	
	Long-term systemic effects dermal	23 mg/kg bw/day	

DNEL/DMEL - General population

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2-ethylhexyl nitrate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	87 µg/m ³	
	Long-term systemic effects dermal	0.52 mg/kg bw/day	
	Long-term local effects dermal	22 µg/cm ²	
	Long-term systemic effects oral	25 µg/kg bw/day	

2-ethylhexan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2.3 mg/m ³	
	Long-term local effects inhalation	26.6 mg/m ³	
	Acute local effects inhalation	26.6 mg/m ³	
	Long-term systemic effects dermal	11.4 mg/kg bw/day	
	Long-term systemic effects oral	1.1 mg/kg bw/day	

PNEC

2-ethylhexyl nitrate

Compartments	Value	Remark
Fresh water	0.83 µg/l	
Fresh water (intermittent releases)	8.3 µg/l	
Marine water	83 ng/l	
Marine water (intermittent releases)	0.83 µg/l	
STP	10 mg/l	
Fresh water sediment	0.47 mg/kg sediment dw	
Marine water sediment	47 µg/kg sediment dw	
Soil	93.5 µg/kg soil dw	

2-ethylhexan-1-ol

Compartments	Value	Remark
Fresh water	0.017 mg/l	
Fresh water (intermittent releases)	0.17 mg/l	
Marine water	0.002 mg/l	
STP	10 mg/l	
Fresh water sediment	0.284 mg/kg sediment dw	
Marine water sediment	0.028 mg/kg sediment dw	
Soil	0.047 mg/kg soil dw	
Oral	55 mg/kg food	

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

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Avoid prolonged and repeated contact with skin. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Thickness	Protection index	Remark
nitrile rubber	> 240 minutes	0.35 mm	Class 5	

c) Eye protection:

Face shield (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Colour	Light yellow
Odour	Characteristic odour
	Solvent-like odour
Odour threshold	No data available in the literature
Melting point	No data available in the literature
Boiling point	150 °C - 230 °C

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Flammability	Not classified as flammable
Explosion limits	No data available in the literature
Flash point	> 62 °C
Auto-ignition temperature	> 251 °C
Decomposition temperature	No data available in the literature
pH	Not applicable (non-soluble in water)
Kinematic viscosity	No data available in the literature
Dynamic viscosity	No data available in the literature
Solubility	Water ; insoluble
Log Kow	Not applicable (mixture)
Vapour pressure	No data available in the literature
Absolute density	806 kg/m ³ ; 20 °C
Relative density	0.81 ; 20 °C
Relative vapour density	No data available in the literature
Particle size	Not applicable (liquid)

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire 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

Keep away from naked flames/heat.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

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

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 15000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3160 mg/kg bw	24 h	Rabbit (male / female)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 6.1 mg/l air	4 h	Rat (male / female)	Read-across	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	> 5.6 mg/l	4 h	Rat (male / female)	Read-across	

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2-ethylhexyl nitrate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral (repeated exposure)	LD50		> 9600 mg/kg		Rat (male / female)	Experimental value	
Oral			category 4			Expert judgement	
Dermal	LDLo		> 4800 mg/kg	24 h	Rabbit	Experimental value	
Dermal			category 4			Expert judgement	
Inhalation (mist)	LC50	OECD 436	> 5.65 mg/l	4 h	Rat (male / female)	Experimental value	
Inhalation (mist)			category 4			Expert judgement	

Classification of this substance is debatable as it does not correspond to the conclusion from the test

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 15000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	≥ 3160 mg/kg bw	24 h	Rabbit (male / female)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 6.1 mg/l air	4 h	Rat (male / female)	Read-across	

2-ethylhexan-1-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	2047 mg/kg bw		Rat (male)	Experimental value	
Dermal	LC50	OECD 402	> 3000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 0.89 mg/l air	4 h	Rat (male / female)	Experimental value	
Inhalation (mixture of vapour and aerosol)	LC50	Equivalent to OECD 403	5.3 mg/l	4 h	Rat (male / female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

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	Read-across	Single treatment without rinsing
Skin	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	

2-ethylhexyl nitrate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Read-across	Single treatment without rinsing
Skin	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	

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2-ethylhexan-1-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Dermal	Highly irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Inhalation	Irritating		4 h		Human	Experimental value	

Conclusion

Not classified as irritating to the skin
 Not classified as irritating to the eyes
 Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

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No (test)data on the mixture available
 Judgement is based on the relevant ingredients
 hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig (male / female)	Read-across	

2-ethylhexyl nitrate

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

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig (male / female)	Read-across	

2-ethylhexan-1-ol

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

Conclusion

Not classified as sensitizing for skin
 Not classified as sensitizing for inhalation

Specific target organ toxicity

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No (test)data on the mixture available
 Judgement is based on the relevant ingredients
 hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Oral (stomach tube)	NOAEL	EPA OPP 82-1	≥ 500 mg/kg bw/day	No adverse systemic effects	13 weeks (7 days / week)	Rat (male / female)	Experimental value	
Dermal							Data waiving	
Inhalation (vapours)	NOAEC systemic effects	Equivalent to OECD 413	6000 mg/m ³ air	No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across	

2-ethylhexyl nitrate

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Dermal	NOAEL systemic effects	EPA OPP 82-2	500 mg/kg bw/day	No adverse systemic effects	21 day(s)	Rabbit (male / female)	Experimental value	
Dermal	NOAEC local effects	EPA OPP 82-2	0.22 mg/cm ²	Skin (no effect)	21 day(s)	Rabbit (male / female)	Experimental value	
Inhalation (vapours)	NOAEC	OECD 413	> 120 ppm	No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value	

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hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	≥ 1000 mg/kg bw/day	No effect	13 weeks (daily)	Rat (male / female)	Experimental value	
Dermal							Data waiving	
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	≥ 6000 mg/m ³ air	No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value	

2-ethylhexan-1-ol

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Oral (stomach tube)	NOAEL	OECD 408	250 mg/kg bw/day	No adverse systemic effects	13 weeks (daily, 5 days / week)	Rat (male / female)	Experimental value	
Inhalation	NOAEC	OECD 413	638.4 mg/m ³ air	No effect	13 weeks (daily, 5 days / week)	Rat (male / female)	Experimental value	

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

NFO-230

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S. typhimurium and E. coli)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Human lymphocytes	No effect	Experimental value	

2-ethylhexyl nitrate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S. typhimurium and E. coli)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes	No effect	Experimental value	

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S. typhimurium)		Read-across	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Human lymphocytes		Experimental value	

2-ethylhexan-1-ol

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S. typhimurium and E. coli)		Experimental value	
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	
Negative	Equivalent to OECD 473	Chinese hamster ovary (CHO)		Experimental value	

Mutagenicity (in vivo)

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No (test)data on the mixture available

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hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Result	Method	Exposure time	Test substrate	Organ/Effect	Value determination	Remark
Negative (Oral (stomach tube))	Equivalent to OECD 474		Mouse (male / female)	No effect	Experimental value	Single treatment

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Result	Method	Exposure time	Test substrate	Organ/Effect	Value determination	Remark
Negative (Oral (stomach tube))	Equivalent to OECD 474		Mouse (male / female)	No effect	Experimental value	Single treatment

2-ethylhexan-1-ol

Result	Method	Exposure time	Test substrate	Organ/Effect	Value determination	Remark
Negative (Intraperitoneal)	Equivalent to OECD 474		Mouse (male / female)	No effect	Experimental value	Single intraperitoneal injection

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

NFO-230

No (test) data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Dermal	NOAEL	Carcinogenic toxicity study	50 %	No carcinogenic effect	52 week(s)	Mouse (male)	Experimental value	

2-ethylhexyl nitrate

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Unknown							Data waiving	

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Dermal	NOAEL	Carcinogenic toxicity study	50 %	No carcinogenic effect	52 week(s)	Mouse (male)	Experimental value	

2-ethylhexan-1-ol

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Oral (stomach tube)	NOAEL	Equivalent to OECD 451	500 mg/kg bw/day	No carcinogenic effect	104 weeks (daily, 5 days / week)	Rat (male / female)	Experimental value	

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

NFO-230

No (test) data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	≥ 5220 mg/m ³ air	10 days (gestation, daily)	Rat	No effect	Read-across	
Maternal toxicity (Oral (stomach tube))	NOAEC	Equivalent to OECD 414	≥ 5220 mg/m ³ air	10 day(s)	Rat	No effect	Read-across	

2-ethylhexyl nitrate

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	≥ 850 mg/m ³ air	19 day(s)	Rat	No effect	Experimental value	
Maternal toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	850 mg/m ³ air	19 days (7h / day)	Rat	No effect	Experimental value	
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 421	20 mg/kg bw/day	34 day(s) - 47 day (s)	Rat (male / female)	No effect	Experimental value	

Reason for revision: 2; 3

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hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	≥ 5220 mg/m ³ air	10 days (6h / day)	Rat	No effect	Read-across	
Maternal toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	≥ 5220 mg/m ³ air	10 days (6h / day)	Rat	No effect	Read-across	

2-ethylhexan-1-ol

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Dermal)	NOAEL	OECD 414	2520 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect	Experimental value	
Maternal toxicity (Dermal)	NOAEL	OECD 414	840 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect	Experimental value	
Effects on fertility (Oral (diet))	NOAEL	OECD 416	10000 ppm		Rat (male / female)	No effect	Read-across	

Conclusion

Not classified for reprotoxic or developmental toxicity

Aspiration hazard

NFO-230

Classification is based on the relevant ingredients
May be fatal if swallowed and enters airways.

Toxicity other effects

NFO-230

Classification is based on the relevant ingredients
hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Skin				Skin (skin dryness or cracking)			Literature study	

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

NFO-230

No effects known.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

NFO-230

No (test)data on the mixture available

Classification is based on the relevant ingredients
hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	> 1000 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	> 1000 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EL50	OECD 201	> 1000 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOELR	OECD 201	1000 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Toxicity aquatic micro-organisms	EL50		> 1000 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR

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2-ethylhexyl nitrate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	0.83 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Measured concentration
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 1.45 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Measured concentration
	NOEC	OECD 201	0.46 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC50	OECD 209	> 1000 mg/l	3 h	Activated sludge			Experimental value; Growth

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	> 1000 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	> 1000 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EL50	OECD 201	> 1000 mg/l	72 h	Pseudokirchneriella subcapitata	Static system		Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC10	OECD 209	> 1000 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; GLP

2-ethylhexan-1-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	17 mg/l	96 h	Leuciscus idus	Flow-through system	Fresh water	Experimental value; Measured concentration
Acute toxicity crustacea	EC50	EU Method C.2	39 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	EU Method C.3	17 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Nominal concentration
	EC10	EU Method C.3	5.3 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Growth rate

Conclusion

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	80 %; GLP	28 day(s)	Read-across

Biodegradation soil

Method	Value	Duration	Value determination
Equivalent to OECD 304A	60 % - 63 %; Oxygen consumption	61 day(s)	Read-across

2-ethylhexyl nitrate

Biodegradation water

Method	Value	Duration	Value determination
OECD 310	0 %; Carbon dioxide	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	20 h	1.5E6 /cm ³	Calculated value

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	89.8 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	11.6 h	1.5E6 /cm ³	Calculated value

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2-ethylhexan-1-ol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C	79 % - 100 %; Oxygen consumption	2 week(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	9.7 h	1.5E6 /cm ³	Calculated value

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)			

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.2 - 7.2		Estimated value

2-ethylhexyl nitrate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	1332 l/kg		Pisces	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		5.2	40 °C	Experimental value

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.00	144.3 l/kg		Pisces	Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		1.99 - 7.71	20 °C	QSAR

2-ethylhexan-1-ol

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.9	25 °C	Experimental value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

(log) Koc

Parameter	Method	Value	Value determination
log Koc		4.2	Read-across

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	66 %	0 %	23 %	9.6 %	1.7 %	Calculated value

2-ethylhexyl nitrate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	3.75	Experimental value

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

(log) Koc

Parameter	Method	Value	Value determination
log Koc		4.16	Read-across

2-ethylhexan-1-ol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1.5 - 2.0	Calculated value

Conclusion

Contains component(s) that adsorb(s) into the soil

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

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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

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Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Groundwater

Groundwater pollutant

2-ethylhexyl nitrate

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

Groundwater

Groundwater pollutant

2-ethylhexan-1-ol

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).

13 07 03* (wastes of liquid fuels: other fuels (including mixtures)). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

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

Road (ADR)

14.1. UN number or ID number

UN number	3082
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14.2. UN proper shipping name

Proper shipping name	environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate)
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14.3. Transport hazard class(es)

Hazard identification number	90
Class	9
Classification code	M6

14.4. Packing group

Packing group	III
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Labels	9
14.5. Environmental hazards	
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	
Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Rail (RID)

14.1. UN number or ID number	
UN number	3082
14.2. UN proper shipping name	
Proper shipping name	environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate)
14.3. Transport hazard class(es)	
Hazard identification number	90
Class	9
Classification code	M6
14.4. Packing group	
Packing group	III
Labels	9
14.5. Environmental hazards	
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	
Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Inland waterways (ADN)

14.1. UN number or ID number	
UN number/ID number	3082
14.2. UN proper shipping name	
Proper shipping name	environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate)
14.3. Transport hazard class(es)	
Class	9
Classification code	M6
14.4. Packing group	
Packing group	III
Labels	9
14.5. Environmental hazards	
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	
Special provisions	274
Special provisions	335
Special provisions	375
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Sea (IMDG/IMSBC)

14.1. UN number or ID number	
UN number	3082
14.2. UN proper shipping name	
Proper shipping name	environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate)
14.3. Transport hazard class(es)	
Class	9
14.4. Packing group	
Packing group	III
Labels	9
14.5. Environmental hazards	
Marine pollutant	P
Environmentally hazardous substance mark	yes
14.6. Special precautions for user	

Reason for revision: 2; 3

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Special provisions	274
Special provisions	335
Special provisions	969
Limited quantities	Combination packagings: not more than 5 liters 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, based on available data
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Air (ICAO-TI/IATA-DGR)

14.1. UN number or ID number

UN number/ID number	3082
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14.2. UN proper shipping name

Proper shipping name	environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate)
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14.3. Transport hazard class(es)

Class	9
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14.4. Packing group

Packing group	III
Labels	9

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	A158
Special provisions	A197
Special provisions	A215
Special provisions	A97

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	30 kg G
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SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
100 %	
806 g/l	

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

Substance or category	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
E2 Hazardous to the Aquatic Environment in Category Chronic 2	200	500	None	Eco-toxicity

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"> · hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics · 2-ethylhexyl nitrate · hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics · 2-ethylhexan-1-ol 	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with 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

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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.

National legislation Belgium

NFO-230

No data available

National legislation The Netherlands

NFO-230

Waterbezwaarlijkheid	A (3); Algemene Beoordelingsmethodiek (ABM)
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National legislation France

NFO-230

No data available

National legislation Germany

NFO-230

WGK	3; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
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hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

TA-Luft	5.2.5
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2-ethylhexyl nitrate

TA-Luft	5.2.5/I
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hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

TA-Luft	5.2.5/I
---------	---------

2-ethylhexan-1-ol

TA-Luft	5.2.5/I
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TRGS900 - Risiko der Fruchtschädigung	2-Ethylhexan-1-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
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National legislation Austria

NFO-230

No data available

National legislation United Kingdom

NFO-230

No data available

Other relevant data

NFO-230

No data available

2-ethylhexan-1-ol

TLV - Carcinogen	2-Ethyl-1-hexanol; A3
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15.2. Chemical safety assessment

No chemical safety assessment is required for a mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
EUH044 Risk of explosion if heated under confinement.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BEI	Biological Exposure Indices
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC10	Effect Concentration 10 %
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
GLP	Good Laboratory Practice

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LC0	Lethal Concentration 0 %
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
LOAEC/LOAEL	Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level
NOAEC/NOAEL	No Observed Adverse Effect Concentration/No Observed Adverse Effect Level
NOEC/NOEL	No Observed Effect Concentration/No Observed Effect Level
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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