

SAFETY DATA SHEET

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



NOVA PTFE OIL AEROSOL

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

1.1. Product identifier

Product name : NOVA PTFE OIL AEROSOL
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

Lubricant

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
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements



Signal word Danger

H-statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H412 Harmful to aquatic life with long lasting effects.

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.
P273 Avoid release to the environment.
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.

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2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
distillates (petroleum), hydrotreated light paraffinic 01-2119487077-29	64742-55-8 265-158-7	25%<C<50%	Asp. Tox. 1; H304	(1)(2)(10)	Constituent
hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics 01-2119457273-39		10% <C<12.5%	Asp. Tox. 1; H304	(1)(10)	Constituent
pentane 01-2119459286-30	109-66-0 203-692-4	10% <C<12.5%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(2)(10)	Constituent
propane 01-2119486944-21	74-98-6 200-827-9	12.5% <C<20%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
butane 01-2119474691-32	106-97-8 203-448-7	10% <C<12.5%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
isobutane 01-2119485395-27	75-28-5 200-857-2	10% <C<12.5%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant

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

(2) Substance with a Community workplace exposure limit

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

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

After skin contact:

Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

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

After eye contact:

No effects known.

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

Reason for revision: 3.2; 5; 9; 15

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5.1.1 Suitable extinguishing media:

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

5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting CO2 extinguisher, Water (water can be used to control jet flame), Foam.

Major fire: Water (water can be used to control jet flame), Foam.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed. Pressurised container: May burst if heated.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Dam up the liquid spill.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

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

7.1. Precautions for safe handling

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe 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. Store in a cool area. Keep out of direct sunlight. Fireproof storeroom. Ventilation at floor level. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

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

EU

Pentane	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1000 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	3000 mg/m ³

Belgium

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Huiles minérales (brouillards)	Time-weighted average exposure limit 8 h	5 mg/m ³
	Short time value	10 mg/m ³
Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3)	Time-weighted average exposure limit 8 h	1000 ppm
	Short time value	980 ppm
	Short time value	2370 mg/m ³
Pentane, tous isomères	Time-weighted average exposure limit 8 h	600 ppm
	Time-weighted average exposure limit 8 h	1800 mg/m ³
	Short time value	750 ppm
	Short time value	2250 mg/m ³

The Netherlands

n-Pentane	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	600 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	1800 mg/m ³
Olienevel (minerale olie)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	5 mg/m ³

France

n-Butane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	800 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1900 mg/m ³
n-Pentane	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	1000 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	3000 mg/m ³

Germany

Butan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m ³
Isobutan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m ³
Pentan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	3000 mg/m ³
Propan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1800 mg/m ³

UK

Butane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1450 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	750 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1810 mg/m ³
Pentane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1800 mg/m ³

USA (TLV-ACGIH)

Butane, all isomers	Short time value (TLV - Adopted Value)	1000 ppm
Pentane, all isomers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	1000 ppm

b) National biological limit values

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

8.1.2 Sampling methods

Product name	Test	Number
N-PENTANE (HYDROCARBONS, BP 36 TO 126 °C)	NIOSH	1500
n-Pentane (Volatile Organic compounds)	NIOSH	2549
Oil Mist (Mineral)	NIOSH	5026
Pentane	OSHA	7

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

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distillates (petroleum), hydrotreated light paraffinic

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2.7 mg/m ³	
	Long-term local effects inhalation	5.6 mg/m ³	
	Long-term systemic effects dermal	1 mg/kg bw/day	

pentane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	3000 mg/m ³	
	Long-term systemic effects dermal	432 mg/kg bw/day	

DNEL/DMEL - General population

distillates (petroleum), hydrotreated light paraffinic

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	0.74 mg/kg bw/day	

pentane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	643 mg/m ³	
	Long-term systemic effects dermal	214 mg/kg bw/day	
	Long-term systemic effects oral	214 mg/kg bw/day	

PNEC

distillates (petroleum), hydrotreated light paraffinic

Compartment	Value	Remark
Oral	9.33 mg/kg food	

pentane

Compartment	Value	Remark
Fresh water	230 µg/l	
Marine water	230 µg/l	
Fresh water (intermittent releases)	880 µg/l	
STP	3600 µg/l	
Fresh water sediment	1.2 mg/kg sediment dw	
Marine water sediment	1.2 mg/kg sediment dw	
Soil	0.55 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

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

8.2.1 Appropriate engineering controls

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

8.2.2 Individual protection measures, such as personal protective equipment

Observe 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 (EN374).

c) Eye protection:

Protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Aerosol
Odour	Solvent-like odour
Odour threshold	No data available
Colour	Light brown
Particle size	No data available
Explosion limits	0.6 - 10.9 vol %
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	3500 hPa ; 20 °C

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Solubility	Water ; insoluble
Relative density	0.68 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	< 0 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	680 kg/m ³ ; 20 °C
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

NOVA PTFE OIL AEROSOL

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	> 5000 mg/kg bw		Rat (male / female)	Read-across	
Dermal	LD50	Equivalent to OECD 402	> 3160 mg/kg bw	24 h	Rabbit (male / female)	Read-across	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	> 5.6 mg/l	4 h	Rat (male)	Read-across	

pentane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	> 2000 mg/kg		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation (vapours)	LC50		> 20 mg/l air	4 h	Rat (male / female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

NOVA PTFE OIL AEROSOL

No (test)data on the mixture available

Judgement is based on the relevant ingredients

NOVA PTFE OIL AEROSOL

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	OECD 405		24; 48; 72 hours	Rabbit	Read-across	Single treatment
Skin	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	

pentane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	Single exposure
Skin	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Human observation	24 h		Human	Experimental value	

Conclusion

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

Respiratory or skin sensitisation

NOVA PTFE OIL AEROSOL

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		24; 48 hours	Guinea pig (female)	Read-across	

pentane

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

Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity

NOVA PTFE OIL AEROSOL

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
Oral (stomach tube)	NOAEL	Equivalent to OECD 422	≥ 1000 mg/kg bw/day		No effect		Rat (male / female)	Read-across
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	≥ 2200 mg/m ³ air		No effect	14 weeks (6h / day, 5 days / week)	Rat (female)	Read-across

pentane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (gases)	NOAEC	OECD 413	20000 mg/m ³		No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation			STOT SE cat.3		Drowsiness, dizziness			Literature study

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

NOVA PTFE OIL AEROSOL

No (test)data on the mixture available

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

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Read-across

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

Mutagenicity (in vivo)

NOVA PTFE OIL AEROSOL

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	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478		Rat (male)		Read-across

pentane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	EU Method B.12	13 weeks (6h / day, 5 days / week)	Rat (male / female)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

NOVA PTFE OIL AEROSOL

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	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	≥ 2200 mg/m ³ air	105 weeks (6h / day, 5 days / week)	Rat (female)	No carcinogenic effect		Read-across

pentane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation								Data waiving
Dermal								Data waiving
Oral								Data waiving

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

NOVA PTFE OIL AEROSOL

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC		≥ 1575 mg/m ³	10 days (6h / day)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEL	Equivalent to OECD 414	≥ 5220 mg/kg bw/day	10 day(s)	Rat	No effect		Experimental value

pentane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL (P)	OECD 414	1000 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	1000 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEC (P/F1)	Equivalent to OECD 416	7000 ppm		Rat (male / female)	Reproductive performance		Read-across

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

NOVA PTFE OIL AEROSOL

No (test)data on the mixture available

Classification is based on the relevant ingredients

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

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

pentane

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

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

NOVA PTFE OIL AEROSOL

No effects known.

SECTION 12: Ecological information

12.1. Toxicity

NOVA PTFE OIL AEROSOL

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; GLP
Acute toxicity crustacea	EL50	OECD 202	> 1000 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	NOELR	OECD 201	> 1000 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EL50		> 1000 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR

pentane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	4.26 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	Other	2.7 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	ErC50	OECD 201	10.7 mg/l	72 h	Scenedesmus sp.	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish	NOELR		6.165 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	QSAR; Growth rate
Long-term toxicity aquatic crustacea	NOELR		10.76 mg/l	21 day(s)	Daphnia magna		Fresh water	QSAR; Reproduction

Conclusion

Harmful 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: Manometric Respirometry Test	80 %; GLP	28 day(s)	Read-across

Biodegradation soil

Method	Value	Duration	Value determination
Equivalent or similar to OECD 304A	59.7 % - 62.6 %; Oxygen consumption	61 day(s)	Read-across

pentane

Biodegradation water

Method	Value	Duration	Value determination
Equivalent or similar to OECD 301F	87 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	3.95 day(s)	500000 /cm ³	Calculated value

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Conclusion

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)			

distillates (petroleum), hydrotreated light paraffinic

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

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

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

pentane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		171		Pimephales promelas	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		3.45	25 °C	Experimental value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4. Mobility in soil

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

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	65.8 %	0 %	22.9 %	9.6 %	1.7 %	Calculated value

pentane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		2.9	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	97.7 %	0 %	0.5 %	0 %	1.8 %	Calculated value

Conclusion

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

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

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

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

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

Ozone-depleting potential (ODP)

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

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).

20 01 13* (separately collected fractions (except 15 01): Solvents). 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. Should not be landfilled with household waste. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

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	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Hazard identification number	
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Hazard identification number	23
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327

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

Sea (IMDG/IMSBC)

14.1. UN number	
UN number	1950
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	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	381
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	Not applicable

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
65 %	
438.8 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 substances or of the mixture	Conditions of restriction
· distillates (petroleum), hydrotreated light paraffinic · hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics · pentane	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;	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

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	<p>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>fiscal reasons, or perfume, or both, if they:</p> <ul style="list-style-type: none"> — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, <p>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</p> <p>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:</p> <p>a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";</p> <p>b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";</p> <p>c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p> <p>6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public.</p> <p>7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'</p>
· pentane	<p>Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.</p>	<p>1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:</p> <ul style="list-style-type: none"> — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopie" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. <p>2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:</p> <p>"For professional users only".</p> <p>3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.</p> <p>4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.</p>

National legislation Belgium

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No data available

National legislation The Netherlands

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Waterbezwaarlijkheid	Z (1); Algemene Beoordelingsmethodiek (ABM)
distillates (petroleum), hydrotreated light paraffinic	
SZW - Lijst van kankerverwekkende stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of carcinogenic substances
SZW - Lijst van mutagene stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of mutagenic substances

National legislation France

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No data available

National legislation Germany

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WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
TA-Luft	5.2.5
pentane	
TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	Pentan; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

National legislation United Kingdom

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Other relevant data

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No data available

distillates (petroleum), hydrotreated light paraffinic

TLV - Carcinogen	Mineral oil, poorly and mildly refined; A2
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15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H-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.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

(*)	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

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