SAFETY DATA SHEET

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

LUBRICANT NSF H1

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

1.1. Product identifier

Product name : LUBRICANT NSF H1
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

Lubricating grease

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@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
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.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard
Caution! Substance is absorbed through the skin

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
soybean oil	8001-22-7 232-274-4	C≥50%		(2)	Constituent	
petroleum gases, liquefied	68476-85-7 270-704-2	10% <C<30%	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant	
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane 01-2119475514-35	921-024-6	5%<C<10%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(2)(10)	Constituent	
n-hexane 01-2119480412-44	110-54-3 203-777-6	0.1% <C<0.2%	Flam. Liq. 2; H225 Repr. 2; H361f Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411 STOT RE 2; H373: C≥5%, (CLP Annex VI (ATP 0))	(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:
If you feel unwell, consult a doctor/medical service.

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.

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:
No effects known.

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

5.1.1 Suitable extinguishing media:

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: 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: persistant risk of physical explosion. 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

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Exposure to fire/heat: keep upwind. 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

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 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

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.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

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

7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents.

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

n-Hexane	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	72 mg/m³

Belgium

Huiles végétales (brouillards)	Time-weighted average exposure limit 8 h	10 mg/m³
n-Hexane	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	72 mg/m³
Pétrole (gaz liquéfié)	Time-weighted average exposure limit 8 h	1000 ppm
	Time-weighted average exposure limit 8 h	1826 mg/m³

The Netherlands

n-Hexaan	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	72 mg/m³
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	144 mg/m³
Olienevel (minerale olie)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	5 mg/m³

France

Hydrocarbures en C6-C12 (ensemble des)	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	1000 mg/m³ **(1)**
	Short time value (VL: Valeur non réglementaire indicative)	1500 mg/m³ **(1)**
	Les valeurs spécifiques fixées pour les hydrocarbures nommément désignés dans la liste restent valable simultanément. Une valeur d'objectif de 500 mg/m³ avait été prévue par la circulaire du 12 juillet 1993, elle devait être réexaminée en 1995 mais ne l'a pas été.	
n-Hexane	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	72 mg/m³

(1) vapeurs

Germany

Kohlenwasserstoffgemische, Verwendung als Lösemittel (Lösemittelkohlenwasserstoffe), additiv-frei: C6-C8 Aliphaten	Time-weighted average exposure limit 8 h (TRGS 900)	700 mg/m³ **(1)**
n-Hexan	Time-weighted average exposure limit 8 h (TRGS 900)	180 mg/m³ **(2)**
	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm **(2)**
Triglyceride: Sojaöl	Time-weighted average exposure limit 8 h (TRGS 900)	5 mg/m³ **(3)**

(1) Vgl. Nummer 2.9 Anwendung und Geltungsbereich der Arbeitsplatzgrenzwerte für Kohlenwasserstoffgemische; UF: 2 (II)
(2) UF: 8 (II)
(3) Alveolengängige Fraktion; UF: 4 (II)

Austria

n-Hexan	Tagesmittelwert (MAK)	20 ppm
	Tagesmittelwert (MAK)	72 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	80 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	288 mg/m³

UK

Liquefied petroleum gas	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1000 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1750 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	1250 ppm
	Short time value (Workplace exposure limit (EH40/2005))	2180 mg/m³
n-Hexane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	20 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	72 mg/m³

Ireland

n-Hexane	Time-weighted average exposure limit 8 h (Binding occupational exposure limit values)	20 ppm
	Time-weighted average exposure limit 8 h (Binding occupational exposure limit values)	72 mg/m³

USA (TLV-ACGIH)

L.P.G. (Liquefied petroleum gas)	*See Appendix F: Minimal Oxygen Content; Simple asphyxiant, Explosion hazard*	
n-Hexane	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm

b) National biological limit values

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

Germany

Hexan (n-Hexan) (2,5-Hexandion plus 4,5-Dihydroxy-2-Hexanon (nach Hydrolyse))	Urin: expositionsende, bzw. schichtende	5 mg/l	

USA (BEI-ACGIH)

n-Hexane (2,5-Hexanedione)	Urine: end of shift	0,5 mg/L	Without hydrolysis

8.1.2 Sampling methods

Product name	Test	Number
n-Hexane (Hydrocarbons, BP36 to 126C)	NIOSH	1500
n-Hexane (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
n-Hexane (Volatile Organic compounds)	NIOSH	2549
n-Hexane	NIOSH	3900

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

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

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2035 mg/m³	
	Long-term systemic effects dermal	773 mg/kg bw/day	

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	75 mg/m³	
	Long-term systemic effects dermal	11 mg/kg bw/day	

DNEL/DMEL - General population

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

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	608 mg/m³	
	Long-term systemic effects dermal	699 mg/kg bw/day	
	Long-term systemic effects oral	699 mg/kg bw/day	

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	16 mg/m³	
	Long-term systemic effects dermal	5.3 mg/kg bw/day	
	Long-term systemic effects oral	4 mg/kg bw/day	

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. 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. 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).

c) Eye protection:

Protective goggles (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	Aerosol
Colour	Colourless to light yellow
Odour	Hydrocarbon odour
Odour threshold	No data available in the literature
Melting point	No data available in the literature
Boiling point	-40 °C - -2 °C ; Propellant
Flammability	Extremely flammable aerosol.
Explosion limits	1.4 - 10.9 vol % ; Propellant
Flash point	Not applicable (aerosol)

Auto-ignition temperature	Not applicable (aerosol)
Decomposition temperature	No data available in the literature
pH	No data available in the literature
Kinematic viscosity	Not applicable (aerosol)
Dynamic viscosity	Not applicable (aerosol)
Solubility	No data available in the literature
Log Kow	Not applicable (mixture)
Vapour pressure	5900 hPa - 17600 hPa ; Propellant
Absolute density	No data available in the literature
Relative density	No data available in the literature
Relative vapour density	Not applicable (aerosol)
Particle size	Not applicable (liquid)

9.2. Other information

No data available

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.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

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

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 5840 mg/kg bw		Rat	Read-across	
Dermal	LD50		2800 mg/kg bw - 3100 mg/kg bw	24 h	Rat (male / female)	Read-across	
Inhalation (vapours)	LC50		> 25.2 mg/l	4 h	Rat (male / female)	Experimental value	

n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	16000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3350 mg/kg bw	4 h	Rabbit (male)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 17.6 mg/l air	24 h	Rat (male)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

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

n-hexane

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
Skin	Irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Read-across	

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

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

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	

n-hexane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Not sensitizing	Equivalent to OECD 429			Mouse	Read-across	

Conclusion

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

Specific target organ toxicity

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Inhalation (vapours)	NOAEC	Subacute toxicity test	14000 mg/m³ air	No neurotoxic effects	3 days (8h / day)	Rat (male)	Experimental value	
Inhalation			STOT SE cat.3	Central nervous system (drowsiness, dizziness)			Literature study	

n-hexane

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Oral (stomach tube)	NOAEL	OECD 408	40 mg/kg bw/day	No effect	13 weeks (daily)	Rat (male / female)	Experimental value	
Oral (stomach tube)	LOAEL	OECD 408	200 mg/kg bw/day	Liver; kidney (weight gain)	13 weeks (daily)	Rat (male / female)	Experimental value	
Dermal							Data waiving	
Inhalation (vapours)	LOAEC	Subchronic toxicity test	3000 ppm	Central nervous system (neurotoxic effects)	16 weeks (daily)	Rat (male)	Experimental value	
Inhalation (vapours)			STOT SE cat.3	Drowsiness, dizziness			Annex VI	

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S. typhimurium and E. coli)	No effect	Read-across	
Negative	Equivalent to OECD 473	Rat liver cells	No effect	Read-across	

n-hexane

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

Mutagenicity (in vivo)

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

Result	Method	Exposure time	Test substrate	Organ/Effect	Value determination	Remark
Negative (Inhalation (vapours))	Equivalent to OECD 478	8 weeks (6h / day, 5 days / week)	Rat (male / female)	No effect	Read-across	

n-hexane

Result	Method	Exposure time	Test substrate	Organ/Effect	Value determination	Remark
Negative (Oral (stomach tube))	OECD 475	13 weeks (daily)	Rat (male / female)	No effect	Experimental value	

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-hexane

Route of exposure	Parameter	Method	Value	Organ/Effect	Exposure time	Species	Value determination	Remark
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	3000 ppm	No carcinogenic effect	104 weeks (6h / day, 5 days / week)	Mouse (female)	Read-across	
Inhalation (vapours)	LOAEC	Equivalent to OECD 451	9018 ppm	Liver (tumor formation)	104 weeks (6h / day, 5 days / week)	Mouse (female)	Read-across	
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	9018 ppm	No carcinogenic effect	104 weeks (6h / day, 5 days / week)	Mouse (male)	Read-across	

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

LUBRICANT NSF H1

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	1200 ppm	10 days (6h / day)	Rat	No effect	Read-across	
Maternal toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	1200 ppm	10 days (6h / day)	Rat	No effect	Read-across	

n-hexane

Category	Parameter	Method	Value	Exposure time	Species	Effect	Value determination	Remark
Developmental toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	200 ppm	15 days (gestation, daily)	Rat	Foetus (no effect)	Experimental value	
Developmental toxicity (Inhalation (vapours))	LOAEC		1000 ppm	15 days (gestation, daily)	Rat	Foetus (reduced fetal bodyweights)	Experimental value	
Maternal toxicity (Inhalation (vapours))	NOAEC	Developmental toxicity study	200 ppm	15 days (gestation, daily)	Rat	No effect	Experimental value	
Maternal toxicity (Inhalation (vapours))	LOAEC	Developmental toxicity study	1000 ppm	15 days (gestation, daily)	Rat	Weight reduction	Experimental value	
Effects on fertility (Inhalation (vapours))	NOAEC	Equivalent to OECD 416	9000 ppm	≥ 13 weeks (6h / day, 5 days / week)	Rat (male / female)	No effect	Experimental value	
Effects on fertility			category 2			Adverse effects on fertility	Annex VI	

Conclusion

Not classified for reprotoxic or developmental toxicity

Aspiration hazard

LUBRICANT NSF H1

Judgement is based on the relevant ingredients
Not classified for aspiration toxicity

Toxicity other effects

LUBRICANT NSF H1

No (test)data on the mixture available

Chronic effects from short and long-term exposure

LUBRICANT NSF H1

Dry skin.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

LUBRICANT NSF H1

No (test)data on the mixture available
Classification is based on the relevant ingredients
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	11 mg/l WAF	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	3 mg/l WAF	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EL50	OECD 201	30 mg/l WAF - 100 mg/l WAF	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	EL10		0.64 mg/l	60 day(s)	Oncorhynchus mykiss			QSAR; Estimated value
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.17 mg/l WAF	21 day(s)	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity aquatic micro-organisms	EL50		> 1000 mg/l	15 h	Activated sludge		Fresh water	QSAR; Estimated value

n-hexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	12 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Estimated value; Lethal
Acute toxicity crustacea	EL50	OECD 202	3 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; Nominal concentration
Toxicity algae and other aquatic plants	EL50		9.285 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	Estimated value; Growth rate
	NOELR		2.077 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	Estimated value; Growth rate
Long-term toxicity fish	NOELR		2.8 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	Estimated value; Growth rate
Long-term toxicity aquatic crustacea	NOELR		4.888 mg/l	21 day(s)	Daphnia magna		Fresh water	Estimated value; Reproduction
Toxicity aquatic micro-organisms	EL50		48.39 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR; Growth

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

Conclusion

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

soybean oil

Biodegradation water

Method	Value	Duration	Value determination
	39 %	5 day(s)	

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

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	98 %; Oxygen consumption	28 day(s)	Experimental value

n-hexane

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	98 %; Oxygen consumption	28 day(s)	Read-across

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	23.5 h	1.5E6 /cm³	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)			

soybean oil

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

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

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		3 - 3.8	20 °C	QSAR

n-hexane

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		4	20 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

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

(log) Koc

Parameter	Method	Value	Value determination
Koc		325 - 1453	QSAR
log Koc		2.5 - 3.2	Calculated value

n-hexane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.34	QSAR

Conclusion

No (test)data on mobility of the component(s) available

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to 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 1005/2009)

soybean oil

Greenhouse gases

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

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

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)

n-hexane

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)

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).
12 01 12* (wastes from shaping and physical and mechanical surface treatment of metals and plastics: spent waxes and fats). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

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. 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	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 or ID 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 or ID number

UN number/ID number	1950

14.2. UN proper shipping name

Proper shipping name	aerosols

14.3. Transport hazard class(es)

Class	2
Classification code	5F

14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

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

Sea (IMDG/IMSBC)

14.1. UN number or ID 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 or ID number

UN number/ID 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
15 % - 40 %	

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:
P3b FLAMMABLE AEROSOLS	5000 (net)	50000 (net)	None	Flammability

REACH Candidate list

Does not contain component(s) included in candidate list of substances of very high concern (SVHC) for authorisation (Article 59 of Regulation (EC) No 1907/2006)

REACH Annex XIV - Authorisation

Does not contain component(s) included in Annex XIV of Regulation (EC) No 1907/2006: list of substances subject to authorisation

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
· hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane · n-hexane	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;	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

	(c) hazard class 4.1; (d) hazard class 5.1.	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.
· hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane · n-hexane	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.
· n-hexane	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

National legislation Belgium

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No data available

petroleum gases, liquefied

Additional classification	Pétrole (gaz liquéfié); C; La mention “C” signifie que l’agent en question relève du champ d’application de l’arrêté royal du 2 décembre 1993 concernant la protection des travailleurs contre les risques liés à l’exposition à des agents cancérigènes et mutagènes et reprotoxiques au travail.

National legislation The Netherlands

LUBRICANT NSF H1

Waterbezwaarlijkheid	Z (2); Algemene Beoordelingsmethodiek (ABM)

n-hexane

SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid)	n-hexaan; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (vruchtbaarheid); 2

National legislation France

LUBRICANT NSF H1

No data available

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

Catégorie cancérogène	Hydrocarbures en C6-C12 (ensemble des)
Catégorie mutagène	Hydrocarbures en C6-C12 (ensemble des)

n-hexane

Catégorie toxique pour la reproduction	n-Hexane; R2

National legislation Germany

LUBRICANT NSF H1

Lagerklasse (TRGS510)	2B: Aerosolpackungen und Feuerzeuge
WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

soybean oil

TRGS900 - Risiko der Fruchtschädigung	Triglyceride: Sojaöl; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

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

TA-Luft	5.2.5

n-hexane

TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	n-Hexan; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

National legislation Austria

LUBRICANT NSF H1

No data available

n-hexane

Fortpflanzungsgefährdend [Beeinträchtigung der Fortpflanzungsfähigkeit (Fruchtbarkeit)]	n-Hexan; f

National legislation United Kingdom

LUBRICANT NSF H1

No data available

National legislation Ireland

LUBRICANT NSF H1

No data available

n-hexane

Skin resorption	n-Hexane; Skin

Other relevant data

LUBRICANT NSF H1

No data available

n-hexane

TLV - Skin absorption	n-Hexane; Skin; Danger of cutaneous absorption

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:

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.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs (nervous system) through prolonged or repeated exposure if inhaled.
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
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
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.