SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

NEVASTANE LUBE SPRAY

SDS # : C374TKKK4

previous revision date : 2024/05/27

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

1.1 Product identifier

Product name : NEVASTANE LUBE SPRAY

UFI : YX6X-D8V1-F00S-GVKW

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Grease for incidental food contact Spray

1.3 Details of the supplier of the safety data sheet

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rm.enco-greece@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : Albania - Armenia, Georgia - Macedonia - Malta : 112
Cyprus Toxicological Center: 1401
Greece : Κέντρο δηλητηριάσεων : +30 21 07 79 37 77

Supplier

Telephone number : Emergency phone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229
Skin Irrit. 2, H315
STOT SE 3, H336
Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

For more details about adverse physical, human health and environmental effects, see sections 9 to 12.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General : P102 - Keep out of reach of children.

Prevention : 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.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P260 - Do not breathe gas, vapor or spray.
P251 - Do not pierce or burn, even after use.

Response : P391 - Collect spillage.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Not applicable.

Contains : Hydrocarbons, C7-C9, isoalkanes

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration >= 0,1 %. This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : Hazard of slipping on spilled product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	REACH #: 01-2119471991-29 EC: 923-037-2 CAS: 64742-48-9*	≥25 - ≤50	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
Hydrocarbons, C7-C9, isoalkanes	REACH #: 01-2119471305-42 EC: 921-728-3 CAS: 90622-56-3*	≥25 - ≤50	Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]
trans-1,3,3,3-tetrafluoroprop-1-ene	REACH #: 01-0000019758-54 EC: 471-480-0 CAS: 29118-24-9	≤10	Press. Gas (Comp.), H280	-	[2]
Carbon dioxide, gas	REACH #: Annex IV EC: 204-696-9 CAS: 124-38-9	≤3	Press. Gas (Comp.), H280 **See Section 16 for the full text of the H statements declared above.**	-	[2]

Additional information : Mineral oil of petroleum origin. Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

The EC substance definition and related classification & labelling have been developed in the framework of the Regulation (EC) No 1907/2006 (REACh). The related CAS number* is used for the purpose of the international inventories present in section 15 of the SDS.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that vapors are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact :
pain or irritation
watering
redness

Inhalation :
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact :
irritation
redness
dryness
cracking

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : carbon monoxide
carbon dioxide
hydrogen fluoride
fluorophosgen

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.
6.4 Reference to other sections	:	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. See Section 10 for incompatible materials before handling or use.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Keep in a bunded area

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a E2	150 tonne 200 tonne	500 tonne 500 tonne

7.3 Specific end use(s)

Recommendations	:	Not available.
Industrial sector specific solutions	:	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/substance	Exposure limit values
trans-1,3,3,3-tetrafluoroprop-1-ene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021) [φθοριούχες ενώσεις]** TWA 8 hours: 2.5 mg/m³ (as F).
Carbon dioxide, gas	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)** TWA 8 hours: 5000 ppm. TWA 8 hours: 9000 mg/m³. STEL 15 minutes: 5000 ppm. STEL 15 minutes: 54000 mg/m³. **EU OEL (Europe, 1/2022)** TWA 8 hours: 5000 ppm. TWA 8 hours: 9000 mg/m³.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH (TLV) TWA 5 mg/m3 (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	DNEL	Long term Dermal	21 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	145 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	27 mg/m³	General population	Systemic
	DNEL	Long term Dermal	9 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	8 mg/kg bw/day	General population	Systemic
Hydrocarbons, C7-C9, isoalkanes	DNEL	Long term Dermal	773 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2035 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	699 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	608 mg/m³	General population	Systemic
trans-1,3,3,3-tetrafluoroprop-1-ene	DNEL	Long term Inhalation	3902 mg/m³	Workers	Systemic

	DNEL	Long term Inhalation	830 mg/m³	General population	Systemic

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
trans-1,3,3,3-tetrafluoroprop-1-ene	Fresh water	0.117 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : safety glasses with side-shields, EN 166.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Hydrocarbon-proof gloves
nitrile rubber
Fluorinated rubber
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency

Body protection : Wear work clothing with long sleeves.
Non-skid safety shoes or boots

Respiratory protection : Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/P2. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Aerosol.]

Color : White.

Odor : Characteristic.

pH : Not applicable. Product is non-soluble (in water).

Melting point/freezing point : Technically not possible to measure

Initial boiling point and boiling range : Not available.

Flash point : Closed cup: >40°C [Closed cup]

Flammability : Yes.

Lower and upper explosion limit : Lower: 0.6%
Upper: 7%

Vapor pressure : Not applicable. [50°C]

Vapor density : Not available.

Relative density : 0.79

Density : 0.79 g/cm³

Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : >40°C [ASTM E 659]

Decomposition temperature : Not applicable.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >20.5 mm^2/s

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Oxidizing properties : This product is not considered oxidising based on chemical structure considerations

Aerosol product

Type of aerosol : Spray

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Keep away from heat and direct sunlight.

10.5 Incompatible materials : Strong oxidizing agents
strong acids
Strong bases

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	Result	Species	Dose	Exposure	Test
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	LC50 Inhalation Dusts and mists	Rat	>5000 mg/m³	4 hours	OECD 403
	LC50 Inhalation Vapor	Rat	40.2 mg/l	1 hours	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
Hydrocarbons, C7-C9, isoalkanes	LC50 Inhalation Vapor	Rat	42.2 mg/l	1 hours	-
	LC50 Inhalation Vapor	Rat	>21 mg/l	4 hours	OECD 403
	LC50 Inhalation Vapor	Rat	21.1 mg/l	4 hours	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
trans-1,3,3,3-tetrafluoroprop-1-ene	LC50 Inhalation Vapor	Rat	>207000 ppm	4 hours	OECD 403 Acute Inhalation Toxicity

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	N/A	N/A	N/A	20.1	N/A

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Conclusion/Summary

Skin : Based on available data, the classification criteria are met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitization

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/substance	Category	Route of exposure	Target organs
Hydrocarbons, C7-C9, isoalkanes	Category 3	-	Narcotic effects

Conclusion/Summary : Based on available data, the classification criteria are met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics Hydrocarbons, C7-C9, isoalkanes	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :

pain or irritation
watering
redness

Inhalation	:	respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	:	irritation redness dryness cracking
Ingestion	:	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Long term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	:	Not available.
General	:	No known significant effects or critical hazards.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Reproductive toxicity	:	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Toxic to aquatic life with long lasting effects.

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	Acute EC50 >1000 mg/l	Algae - *Pseudokirchneriella subcapitata*	72 hours	OECD 201
	Acute EC50 >1000 mg/l	Daphnia - *Daphina Magna*	48 hours	OECD 202
	Acute NOELR 1000 mg/l	Algae - *Pseudokirchneriella subcapitata*	72 hours	OECD 201
	Chronic NOELR <1 mg/l	Daphnia - *Daphina Magna*	21 days	OECD 211
	Chronic NOELR 0.19 mg/l	Fish - *Oncorhynchus mykiss*	28 days	-
Hydrocarbons, C7-C9, isoalkanes	Acute EC50 10 mg/l	Algae - *Pseudokirchneriella subcapitata*	72 hours	OECD 201
	Acute EC50 2.4 mg/l	Daphnia - *Daphnia magna*	48 hours	-
	Acute LC50 18.4 mg/l	Fish	96 hours	-
	Acute NOEL 6.3 mg/l	Algae - *Pseudokirchneriella subcapitata*	72 hours	OECD 201
	Chronic NOEL 0.17 mg/l	Daphnia - *Daphnia magna*	21 days	-
	Chronic NOEL 0.78 mg/l	Fish - *Oncorhynchus mykiss*	28 days	-
trans-1,3,3,3-tetrafluoroprop-1-ene	Acute EC50 >170 mg/l	Algae - *Pseudokirchneriella subcapitat*	72 hours	OECD 201
	Acute EC50 >160 mg/l	Crustaceans - *Daphnia magna*	48 hours	OECD 202
	Acute LC50 >117 mg/l	Fish - *Cyprinus carpio*	96 hours	OECD 203
	Chronic NOEC >170 mg/l	Algae - *Pseudokirchneriella subcapitat*	72 hours	OECD 201

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
trans-1,3,3,3-tetrafluoroprop-1-ene	OECD 301D	0 % - Not readily - 28 days	-	Activated sludge

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons, C10-C12, isoalkanes, <2% aromatics	-	-	Readily
Hydrocarbons, C7-C9, isoalkanes	-	-	Not readily
trans-1,3,3,3-tetrafluoroprop-1-ene	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	$LogK_{ow}$	BCF	Potential
trans-1,3,3,3-tetrafluoroprop-1-ene	1.6	-	Low
Carbon dioxide, gas	0.83	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC})	:	Not available.
Mobility	:	Not available.
Mobility in soil	:	The product is insoluble and floats on water

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration >= 0,1 %.

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal	:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Should not be released into the environment.
Hazardous waste	:	Yes. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 16 05 04*

Packaging

Methods of disposal	:	The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Special precautions	:	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2 	2 	2.1 	2.1 

14.4 Packing group	-	-	-	-
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Limited quantity 1 L
Special provisions 190, 327, 625, 344
Tunnel code (D)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 190, 327, 625, 344

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959

ICAO/IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.
Special provisions A145, A167, A802

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Labeling : Not applicable.

Other EU regulations

Take note of Dir 94/33/EC on the protection of young people at work.
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
DIRECTIVE 2008/68/EC related on the inland transport of dangerous goods

Industrial emissions (integrated pollution prevention and control) - Air	:	Listed
Industrial emissions (integrated pollution prevention and control) - Water	:	Not listed
Explosive precursors	:	Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers :

3

Extremely flammable

aerosol : Directive 75/324/EEC of 20 May 1975

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P3a E2

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia inventory (AIIC)	: Not determined.
Canada inventory (DSL/NDSL)	: Not determined.
China inventory (IECSC)	: Not determined.
Europe inventory (EC)	: All components are listed or exempted.
Japan inventory	: **Japan inventory (CSCL)**: Not determined. **Japan inventory (ISHL)**: Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: Not determined.
Korea inventory (KECI)	: Not determined.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : Risk management measures and safety conditions of use are included in the relevant sections of the SDS

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

ACGIH = American Conference of Governmental Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
DMSO = Dimethyl Sulfoxide
EC50 = Half maximal effective concentration
EL50 = median Effective Loading
EUH statement = CLP-specific Hazard statement
HSE = Health, Safety and Environment
IC50 = Half maximal inhibitory concentration
IDHL = Immediately dangerous to life or health
LC50 = Median lethal concentration
LD50 = Median lethal dose
LL50 = median Lethal Loading
LogKow = logarithm of the octanol/water partition coefficient
N/A = Not available
NIOSH = National Institute of Occupational Safety and Health
NOAEL = No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL = No Observed Effect Level
NOELR = No observed Effect Loading Rate
OECD = Organisation for Economic Co-operation and Development
OEL = Occupational Exposure Limit

PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
QSAR = Quantitative Structure–Activity Relationship
REL = Recommanded Exposure Limit
STEL = Short Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weight Average
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative
UFI = Unique Formula Identifier
UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 1, H222, H229	On basis of test data
Skin Irrit. 2, H315	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H222, H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H224	Extremely flammable liquid and vapor.
H226	Flammable liquid and vapor.
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.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Aerosol 1	AEROSOLS - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Flam. Liq. 1	FLAMMABLE LIQUIDS - Category 1
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.