

FLUIDE LDS

SDS # : 30459

previous revision date : 2024/07/05

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

1.1 Product identifier

Product name : FLUIDE LDS
UFI : DT5Y-J826-2000-PPDC

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

Identified uses
Transmission fluids General use of lubricants and greases in vehicles or machinery - Industrial General use of lubricants and greases in vehicles or machinery - Professional Formulation additives, lubricants and greases - Industrial

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
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Tel : +45 45813701
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Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : Toxicity Center: +354 543 2222

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]

Acute Tox. 4, H332

Asp. Tox. 1, H304

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

Ingredients of unknown toxicity : 5.4 percent of the mixture consists of component(s) of unknown acute toxicity

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 : H304 - May be fatal if swallowed and enters airways.
H332 - Harmful if inhaled.

Precautionary statements

General : P103 - Read carefully and follow all instructions.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing gas, vapor or spray.

Response : P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331 - Do NOT induce vomiting.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Contains : Hydrogenated dimerization products of 1-decene and reaction products of 1-decene, hydrogenated
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene
reaction mass of: branched icosane; branched docosane; branched tetracosane
Distillates (petroleum), hydrotreated middle

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 $\geq 0,1$ %.

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
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated	REACH #: 01-2119537268-33 EC: 931-652-2	≥25 - ≤50	Acute Tox. 4, H332 Asp. Tox. 1, H304	ATE [Inhalation (dusts and mists)] = 1.17 mg/l	[1]
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	REACH #: 01-2119411393-49 EC: 700-308-1	≥25 - ≤48	Acute Tox. 4, H332 Asp. Tox. 1, H304	ATE [Inhalation (dusts and mists)] = 1.4 mg/l	[1]
reaction mass of: branched icosane;branched docosane;branched tetracosane	CAS: 151006-58-5	≥10 - ≤25	Acute Tox. 4, H332 Asp. Tox. 1, H304	ATE [Inhalation (dusts and mists)] = 1.5 mg/l	[1]
Distillates (petroleum), hydrotreated middle	EC: 265-148-2 CAS: 64742-46-7	≤10	Asp. Tox. 1, H304	-	[1] [2]
Dec-1-ene, trimers, hydrogenated	REACH #: 01-2119493949-12 EC: 500-393-3 CAS: 157707-86-3	≤10	Asp. Tox. 1, H304	-	[1]
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7	≤1	Not classified.	-	[2]
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	REACH #: 01-2119510877-33 EC: 620-540-6 CAS: 1218787-32-6	<0.25	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 1200 mg/kg M [Acute] = 10 M [Chronic] = 1	[1]

Additional information : Mineral oil of petroleum origin. Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 The product is made from synthetic base oils

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

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 if irritation occurs.
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 adverse health effects persist or are severe. 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. Get medical attention if symptoms occur. 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 adverse health effects persist or are severe. 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. The exposed person may need to be kept under medical surveillance for 48 hours.
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	: No specific data.
Inhalation	: No specific data.
Skin contact	:  irritation dryness cracking
Ingestion	:  nausea or vomiting

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 : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : carbon monoxide
carbon dioxide
Silicon Dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

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.

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. Do not touch or walk through spilled material. 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).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. 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. 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). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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

Store in accordance with local regulations. Store in original container protected 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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

- Recommendations** : See exposure scenarios
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/substance	Exposure limit values
Distillates (petroleum), hydrotreated middle	Ministry of Welfare, List of Exposure Limits (Iceland, 4/2023) [Óliúpoka, steinefnaolíuagnir] TWA 8 hours: 1 mg/m ³ . Form: particulates.
Distillates (petroleum), hydrotreated heavy paraffinic	Ministry of Welfare, List of Exposure Limits (Iceland, 4/2023) [Óliúpoka, steinefnaolíuagnir] TWA 8 hours: 1 mg/m ³ . Form: particulates.

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
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated	DNEL	Short term Inhalation	60 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	50 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	22.9 mg/m ³	Workers	Systemic
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	DNEL	Short term Inhalation	3.9 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	3.9 mg/m ³	General population	Local
	DNEL	Short term Inhalation	16.8 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	3.9 mg/m ³	General population	Local
	DNEL	Long term Oral	1.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.25 mg/kg bw/day	General population	Systemic
Distillates (petroleum), hydrotreated middle	DNEL	Long term Dermal	2.91 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4.85 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	16.4 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	3001.6 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	5002.67 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	0.214 mg/kg bw/day	General population	Systemic
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	DNEL	Long term Dermal	0.214 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.745 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	2.112 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	Fresh water	0.000214 mg/l	-
	Marine water	0.0000214 mg/l	-
	Fresh water sediment	1.692 mg/kg dwt	-
	Marine water sediment	0.1692 mg/kg dwt	-
	Soil	5 mg/kg dwt	-
	Sewage Treatment Plant	1.5 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.

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	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
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. [limpid]	
Color	: Orange.	
Odor	: Characteristic.	
pH	: Not applicable.	Product is non-soluble (in water).
Melting point/freezing point	: Not applicable.	
Initial boiling point and boiling range	: >300°C [EN ISO 3405]	
Flash point	: Open cup: 150°C [ASTM D 92]	



Flammability	: Not applicable.
Lower and upper explosion limit	: Lower: 7% Upper: 9%
Vapor pressure	: <0.013 kPa [room temperature] Not applicable. [50°C]
Vapor density	: >2 [Air = 1]
Relative density	: 0.817 [ISO 3675]
Density	: 0.817 g/cm ³ [15°C] [ISO 3675]
Solubility(ies)	:

Media	Result
water	Not soluble

Solubility in water	: 0.888 g/l
Miscible with water	: No.
Partition coefficient: n-octanol/ water	: Not applicable.
Auto-ignition temperature	: >150°C [ASTM E 659]
Decomposition temperature	: Not applicable.
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): 17 mm ² /s [ISO 3104]

Particle characteristics

Median particle size	: Not applicable.
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9.2 Other information

Pour point	: -51°C (-59.8°F)
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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	: No specific data.
10.5 Incompatible materials	: Strong oxidizing agents
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
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated	LC50 Inhalation Dusts and mists	Rat	1.17 mg/l	4 hours	OECD 403
	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 423 Acute Oral toxicity - Acute Toxic Class Method OECD 403
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	LC50 Inhalation Dusts and mists	Rat	1.4 mg/l	4 hours	
	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
reaction mass of: branched icosane;branched docosane; branched tetracosane	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours	-
	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>2000 mg/kg	-	OECD 420
Distillates (petroleum), hydrotreated middle	LC50 Inhalation Dusts and mists	Rat	4.6 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
Dec-1-ene, trimers, hydrogenated	LC50 Inhalation Vapor	Rat	1.17 mg/l	4 hours	OECD 403
	LC50 Inhalation Vapor	Rat	0.9 mg/l	4 hours	OECD 403
	LC50 Inhalation Vapor	Rat	1.4 mg/l	4 hours	OECD 403
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	LD50 Dermal	Rat	>3000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
	LD50 Oral	Rat - Female	1200 mg/kg	-	OECD 401

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
FLUIDE LDS	N/A	N/A	N/A	N/A	1.7
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated	N/A	N/A	N/A	N/A	1.17
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	N/A	N/A	N/A	N/A	1.4
reaction mass of: branched icosane;branched docosane;branched tetracosane	N/A	N/A	N/A	N/A	1.5
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	1200	N/A	N/A	N/A	N/A

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

Irritation/Corrosion



Product/substance	Result	Species	Score	Exposure	Test
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	Skin - Edema	Rabbit	3.67	4 hours	OECD 404
	Skin - Erythema/Eschar	Rabbit	2.67	4 hours	OECD 404

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not 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)

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

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

Product/substance	Result
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated	ASPIRATION HAZARD - Category 1
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	ASPIRATION HAZARD - Category 1
reaction mass of: branched icosane;branched docosane; branched tetracosane	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated middle	ASPIRATION HAZARD - Category 1
Dec-1-ene, trimers, hydrogenated	ASPIRATION HAZARD - Category 1

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

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
Inhalation : Harmful if inhaled.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	:  irritation dryness cracking
Ingestion	:  nausea or vomiting

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

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
 Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	Acute EC50 1000 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours	-
	Acute LC50 5056 mg/l	Daphnia - <i>Americamysis bahia</i>	48 hours	-
	Acute LC50 5003 mg/l	Fish	96 hours	-
	Acute NOEL >5003 mg/l	Fish - <i>Cyprinodon variegatus</i>	96 hours	OECD 203
	Chronic NOEC 1001 mg/l	Daphnia	21 days	OECD 211
	Acute EC50 >1000 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	96 hours	-
reaction mass of: branched icosane; branched docosane; branched tetracosane	Acute EC50 151 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	-



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Distillates (petroleum), hydrotreated middle	Acute EC50 22 mg/l	Algae	72 hours	OECD 201
	Acute EC50 68 mg/l	Daphnia	48 hours	OECD 202
	Chronic NOEL 0.163 mg/l	Daphnia	21 days	-
	Chronic NOEL 0.069 mg/l	Fish	14 days	-
Dec-1-ene, trimers, hydrogenated	Acute EC50 >1000 mg/l	Algae - <i>Scenedesmus capricornutum</i>	72 hours	OECD 201
	Acute EC50 >5002 ppm	Daphnia - <i>Americamysis bahia</i>	96 hours	OECD 202
	Acute EC50 >150 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	-
	Acute NOEL 1000 mg/l	Algae - <i>Scenedesmus capricornutum</i>	72 hours	OECD 201
	Acute NOEL 1000 mg/l	Fish - <i>Oncorhynchus mykiss</i>	96 hours	-
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	Chronic NOEL 125 mg/l	Daphnia - <i>Daphnia magna</i>	21 days	OECD 211
	Acute EC50 0.12 mg/l	Algae	72 hours	-
	Acute LC50 0.6 mg/l	Fish	96 hours	-
	Chronic NOEC 0.32 mg/l	Daphnia	21 days	-

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Hydrogenated dimerization products of 1-decene, 1-dodecene and 1-octene	-	-	Readily
Distillates (petroleum), hydrotreated middle	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Hydrogenated dimerization products of 1-decene and reaction products of 1-decene,hydrogenated reaction mass of: branched icosane;branched docosane; branched tetracosane	6.5	-	High
Dec-1-ene, trimers, hydrogenated	>6.5	-	High
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	>6.5	-	High
	3.6	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility The product is insoluble and floats on water Loss by evaporation is limited

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 $\geq 0,1\%$.

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. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

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: 13 02 06*

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-



14.5 Environmental hazards	No.	No.	No.	No.
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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.

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 Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Industrial emissions : Not listed

(integrated pollution prevention and control) - Air

Industrial emissions : Not listed

(integrated pollution prevention and control) - Water

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.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.

Inventory list

Australia inventory (AIIIC)	: 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)	: Not determined.
Philippines inventory (PICCS)	: Not determined.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: Not determined.
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 : See exposure scenarios

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 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level DMEL = Derived Minimal Effect Level DMSO = Dimethyl Sulfoxide
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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 = Recommended 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
 Unique Formula Identifier (UFI)
 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
Acute Tox. 4, H332 Asp. Tox. 1, H304	Calculation method Calculation method

Full text of abbreviated H statements

H302 H304 H314 H318 H332 H400 H410	Harmful if swallowed. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]

Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Asp. Tox. 1 Eye Dam. 1 Skin Corr. 1C	ACUTE TOXICITY - Category 4 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 1C
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Date of revision : 2024/07/23
previous revision date : 2024/07/05
Version : 3.02

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 30459
Product name : FLUIDE LDS

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Industrial

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Industrial
Process Category: PROC01, PROC02, PROC08b, PROC09
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07

Health Contributing scenarios : **General measures applicable to all activities**
General exposures (closed systems) - PROC01
Initial factory fill of equipment Use in contained systems - PROC02, PROC09
Initial factory fill of equipment Open systems - PROC08b
Operation of equipment containing engine oils and similar Use in contained systems - PROC01
Equipment cleaning and maintenance - PROC08b
Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature) - PROC08b
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. unless stated differently.
Assumes a good basic standard of occupational hygiene has been implemented.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.

Personal protection : Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

No other specific measures identified.

Contributing scenario controlling worker exposure for 4: Initial factory fill of equipment Use in contained systems

No other specific measures identified.

Contributing scenario controlling worker exposure for 5: Initial factory fill of equipment Open systems**Frequency and duration of use/exposure** : Avoid carrying out activities involving exposure for more than 4 hours.**Ventilation control measures** : Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour)**Contributing scenario controlling worker exposure for 6: Operation of equipment containing engine oils and similar Use in contained systems**

No other specific measures identified.

Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance**Technical conditions and measures at process level (source) to prevent release** : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.**Engineering controls** : Drain down system prior to equipment break-in or maintenance.**Ventilation control measures** : Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection** : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.**Contributing scenario controlling worker exposure for 8: Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature)****Technical conditions and measures to control dispersion from source towards the worker** : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.**Engineering controls** : Drain down system prior to equipment break-in or maintenance.**Ventilation control measures** : Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely.**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection** : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.**Contributing scenario controlling worker exposure for 9: Storage****Engineering controls** : Store substance within a closed system.**Section 3 - Exposure estimation and reference to its source****Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1:****Exposure assessment (environment):** : Used ECETOC TRA model.**Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Initial factory fill of equipment Use in contained systems

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Initial factory fill of equipment Open systems

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Operation of equipment containing engine oils and similar Use in contained systems

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Equipment cleaning and maintenance

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Storage

Exposure assessment (human): : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 30459
Product name : FLUIDE LDS

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Professional

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Professional
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Health Contributing scenarios : **General measures applicable to all activities**
Operation of equipment containing engine oils and similar Use in contained systems - PROC01
Material transfers Non-dedicated facility - PROC08a
Equipment cleaning and maintenance Dedicated facility - PROC08b, PROC20
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario	: Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. unless stated differently.
Assumes a good basic standard of occupational hygiene has been implemented.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.

Personal protection : Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: Operation of equipment containing engine oils and similar Use in contained systems

No other specific measures identified.

Contributing scenario controlling worker exposure for 4: Material transfers Non-dedicated facility

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

Contributing scenario controlling worker exposure for 5: Equipment cleaning and maintenance Dedicated facility

Technical conditions and measures at process level (source) to prevent release : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Engineering controls : Drain down system prior to equipment break-in or maintenance.

Contributing scenario controlling worker exposure for 6: Storage

Engineering controls : Store substance within a closed system.

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment): : Used ECETOC TRA model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: Operation of equipment containing engine oils and similar Use in contained systems

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Material transfers Non-dedicated facility

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Equipment cleaning and maintenance Dedicated facility

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Storage

Exposure assessment (human):	: The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 30459
Product name : FLUIDE LDS

Section 1 - Title

Short title of the exposure scenario : Formulation additives, lubricants and greases - Industrial

List of use descriptors : **Identified use name:** Formulation additives, lubricants and greases - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Health Contributing scenarios : **General measures applicable to all activities**
General exposures Use in contained systems Elevated temperature - PROC02
Mixing operations Closed systems Batch processes at elevated temperatures - PROC03
Mixing operations Open systems Batch processes at elevated temperatures - PROC04, PROC05
Mixing operations (open systems) - PROC04, PROC05
Process sampling - PROC04, PROC08b
Bulk transfers Dedicated facility - PROC08b
Drum/batch transfers Dedicated facility - PROC08b
Drum/batch transfers Non-dedicated facility - PROC08a
Equipment cleaning and maintenance - PROC08a, PROC08b
Drum and small package filling - PROC09
Laboratory activities - PROC15
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario	: Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %. (unless stated differently)

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Amounts used : Not applicable.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Human factors not influenced by risk management : Not applicable.

Other operational conditions affecting worker exposure : Covers percentage substance in the product up to 100% (unless stated differently)

Conditions and measures related to personal protection, hygiene and health evaluation

FLUIDE LDS		Formulation additives, lubricants and greases - Industrial
Advice on general occupational hygiene	: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.	
Personal protection	: Use suitable eye protection.	
Contributing scenario controlling worker exposure for 3: General exposures Use in contained systems Elevated temperature		
No other specific measures identified.		
Contributing scenario controlling worker exposure for 4: Mixing operations Closed systems Batch processes at elevated temperatures		
Ventilation control measures	: Provide extract ventilation to points where emissions occur.	
Contributing scenario controlling worker exposure for 5: Mixing operations Open systems Batch processes at elevated temperatures		
Frequency and duration of use/exposure	: Avoid carrying out activities involving exposure for more than 4 hours.	
Ventilation control measures	: Provide extract ventilation to points where emissions occur.	
Contributing scenario controlling worker exposure for 6: Mixing operations (open systems)		
Ventilation control measures	: Provide extract ventilation to points where emissions occur.	
Contributing scenario controlling worker exposure for 7: Process sampling		
Frequency and duration of use/exposure	: Avoid carrying out activities involving exposure for more than 1 hour per day.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.	
Contributing scenario controlling worker exposure for 8: Bulk transfers Dedicated facility		
Frequency and duration of use/exposure	: Avoid carrying out activities involving exposure for more than 4 hours.	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.	
Contributing scenario controlling worker exposure for 9: Drum/batch transfers Dedicated facility		
Ventilation control measures	: Provide extract ventilation to points where emissions occur.	
Contributing scenario controlling worker exposure for 10: Drum/batch transfers Non-dedicated facility		
Frequency and duration of use/exposure	: Avoid carrying out activities involving exposure for more than 1 hour per day.	
Ventilation control measures	: Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).	
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	: Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.	

Contributing scenario controlling worker exposure for 11: Equipment cleaning and maintenance

Technical conditions and measures to control dispersion from source towards the worker : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Engineering controls : Drain down and flush system prior to equipment break-in or maintenance.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Clear spills immediately.

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.

Contributing scenario controlling worker exposure for 12: Drum and small package filling

Ventilation control measures : Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

Contributing scenario controlling worker exposure for 13: Laboratory activities

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Contributing scenario controlling worker exposure for 14: Storage

Engineering controls : Store substance within a closed system.

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment): : Used ECETOC TRA model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: General exposures Use in contained systems Elevated temperature

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Mixing operations Closed systems Batch processes at elevated temperatures

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Mixing operations Open systems Batch processes at elevated temperatures

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 6: Mixing operations (open systems)

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 7: Process sampling

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 8: Bulk transfers Dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 9: Drum/batch transfers Dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 10: Drum/batch transfers Non-dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 11: Equipment cleaning and maintenance

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 12: Drum and small package filling

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 13: Laboratory activities

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 14: Storage

Exposure assessment (human):	: The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.