SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

FLUIDMATIC XLD FE

SDS no. : 089937

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

1.1 Product identifier

Product name : FLUIDMATIC XLD FE

Product code : 089937

Product description : Not available.

Product type : Liquid.

Other means of identification : Not available.

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

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

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
562 Avenue du Parc de L'ile
92029 Nanterre Cedex FRANCE
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71
rm.msds-lubs@totalenergies.com

TotalEnergies Marketing UK Limited
10 Upper Bank Street (19th floor)
Canary Wharf,
London E14 5BF
UNITED KINGDOM
Tel: +44 (0)20 7339 8000
Fax: +44 (0)20 7339 8033
rm.gb-msds@totalenergies.com

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Service (NPIS): 111

Supplier

Telephone number : Emergency telephone: +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]

Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Response : Not applicable.

Storage : Not applicable.

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

Supplemental label elements : Contains 1,2-Propanediol,3-amino-,N,N-dicoco alkyl derivs, 1-(tert-dodecylthio) propan-2-ol and 2-tetradecyloxirane, reaction products with boric acid. May produce an allergic reaction.

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

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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 spilt product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
Distillates (petroleum), hydrotreated light paraffinic	REACH #: 01-2119487077-29 EC: 265-158-7 CAS: 64742-55-8	≥50 - ≤75	Asp. Tox. 1, H304	[1]
mineral oil	-	≤5	Asp. Tox. 1, H304	[1]
Distillates (petroleum), hydrotreated light paraffinic	REACH #: 01-2119487077-29 EC: 265-158-7 CAS: 64742-55-8	≤5	Asp. Tox. 1, H304	[1]
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	REACH #: 01-2119969520-35 EC: 800-172-4 CAS: 398141-87-2	≤3	Aquatic Chronic 2, H411	[1]
1,2-Propanediol, 3-amino-, N,N-dicoco alkyl derivs.	REACH #: 01-0000020142-86 EC: 482-000-4 CAS: 897393-64-5	<1	Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
1-(tert-dodecylthio)propan-2-ol	REACH #: 01-2119953277-30 EC: 266-582-5 CAS: 67124-09-8	<1	Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
2-tetradecyloxirane, reaction products with boric acid	REACH #: 01-2119976364-28 EC: 701-392-2	≤0.3	Skin Sens. 1B, H317	[1]
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	REACH #: 01-2119777867-13 EC: 202-414-9 CAS: 95-38-5	<0.1	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	[1]
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	REACH #: 01-2119510877-33 EC: 620-540-6 CAS: 1218787-32-6	<0.1	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) **See Section 16 for the full text of the H statements declared above.**	[1]

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

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

SECTION 3: Composition/information on ingredients

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. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
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 : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful 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.

SECTION 5: Firefighting measures

Hazardous combustion products : carbon monoxide
carbon 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 British standard BS 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 spilt material. Put on appropriate personal protective equipment.

For emergency responders : If specialised 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 spilt 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. May be harmful to the environment if released in large quantities.

6.3 Methods and material 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 the 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 spilt 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.

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

Store in accordance with local regulations. Shelf life: 12months. 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

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

No exposure limit value known.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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

SECTION 8: Exposure controls/personal protection

Product/substance	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated light paraffinic	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m³	Workers	Local
mineral oil	DNEL	Long term Inhalation	5.58 mg/m³	Workers	Local
	DNEL	Long term Inhalation	2.73 mg/m³	Workers	Systemic
	DNEL	Long term Oral	0.74 mg/kg	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	1.19 mg/m³	General population	Local
Distillates (petroleum), hydrotreated light paraffinic	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m³	Workers	Local
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	DNEL	Long term Oral	2.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	4.35 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	24.7 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	350 mg/kg bw/day	Workers	Systemic
1-(tert-dodecylthio)propan-2-ol	DNEL	Short term Dermal	107.7 µg/cm²	General population	Local
	DNEL	Short term Dermal	215.4 µg/cm²	Workers	Local
	DNEL	Long term Oral	0.84 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.67 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.9 mg/m³	General population	Systemic
	DNEL	Long term Dermal	3.34 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	11.8 mg/m³	Workers	Systemic

SECTION 8: Exposure controls/personal protection

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	DNEL	Long term Dermal	0.06 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.46 mg/m³	Workers	Systemic
	DNEL	Short term Dermal	2 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	14 mg/m³	Workers	Systemic
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	DNEL	Long term Oral	0.15 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.15 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.522 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	2.96 mg/m³	Workers	Systemic

PNECs

Product/substance	Compartment Detail	Value	Method Detail
mineral oil	Secondary Poisoning	9.33 mg/kg	-
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	Fresh water	0.0024 mg/l	-
	Marine water	0.00024 mg/l	-
	Fresh water sediment	0.435 mg/kg dwt	-
	Marine water sediment	0.0435 mg/kg dwt	-
	Soil	0.086 mg/kg dwt	-
	Sewage Treatment Plant	100 mg/l	-
1-(tert-dodecylthio)propan-2-ol	Fresh water	0.0064 mg/l	-
	Marine water	0.00064 mg/l	-
	Fresh water sediment	1.8 mg/kg dwt	-
	Marine water sediment	0.18 mg/kg dwt	-
	Soil	0.21895 mg/kg dwt	-
	Sewage Treatment Plant	100 mg/l	-
2-tetradecyloxirane, reaction products with boric acid	Fresh water	1 mg/l	-
	Marine water	100 µg/l	-
	Fresh water sediment	42700 mg/kg dwt	-
	Marine water sediment	4270 mg/kg dwt	-
	Sewage Treatment Plant	100 mg/l	-
	Soil	8540 mg/kg dwt	-
2-(2-heptadec-8-enyl-2-imidazolin-1-yl) ethanol	Fresh water	0.00003 mg/l	-
	Marine water	0.000003 mg/l	-
	Fresh water sediment	0.376 mg/kg dwt	-
	Marine water sediment	0.0376 mg/kg dwt	-
	Soil	0.075 mg/kg dwt	-
	Sewage Treatment Plant	0.27 mg/l	-
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	Fresh water	0.000214 mg/l	-

SECTION 8: Exposure controls/personal protection

	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 : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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 : In case of contact through splashing: 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.
Protective 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/P1. 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. [Clear]

Colour : Red.

Odour : Characteristic.

Melting point/freezing point : Not applicable.

Initial boiling point and boiling range : >316°C (>600.8°F) [ISO 3405]

Flammability (solid, gas) : Non-flammable.

Upper/lower flammability or explosive limits : Lower: 0.9%
Upper: 7%

Flash point : Open cup: 212°C (413.6°F) [Cleveland Open Cup (COC)]

Auto-ignition temperature : >212°C (>413.6°F) [ASTM E 659]

Decomposition temperature : Not applicable.

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

Viscosity : Kinematic (40°C): 0.3393 cm^2/s [ASTM D 445]

Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.

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

Vapour pressure : <0.01 kPa (<0.075 mm Hg) [room temperature]
Not applicable. [50°C (122°F)]

Relative density : 0.85 [ISO 3675]

Density : 0.85 g/cm³ [15°C (59°F)] [ISO 3675]

Vapour density : >2 [Air = 1]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Pour point : -50°C (-58°F)

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.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Strong oxidising 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
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 420
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 420
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	LD50 Dermal	Rabbit	4000 to 8000 mg/kg	-	STDMETH, ASTM and USEPA
	LD50 Oral	Rat	>10 mg/kg	-	-
1-(tert-dodecylthio)propan-2-ol	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	-
	LD50 Dermal	Rabbit	2201 mg/kg	-	OECD 434
	LD50 Oral	Rat	5500 mg/kg	-	-
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	-
	LD50 Oral	Rat	1265 mg/kg	-	OECD 401
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	LD50 Oral	Rat - Female	1200 mg/kg	-	OECD 401

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Distillates (petroleum), hydrotreated light paraffinic	N/A	N/A	N/A	N/A	5.1
1-(tert-dodecylthio)propan-2-ol	5500	2201	N/A	N/A	5.1
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	1265	N/A	N/A	N/A	5.1
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 not met.

Irritation/Corrosion

SECTION 11: Toxicological information

Product/substance	Result	Species	Score	Exposure	Test
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	Skin - Oedema	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.

Sensitisation

Conclusion/Summary :

Skin : Based on available data, the classification criteria are not met. Contains sensitizer. May produce an allergic reaction.

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)

Not available.

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

Specific target organ toxicity (repeated exposure)

Product/substance	Category	Route of exposure	Target organs
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	Category 2	-	-

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

Aspiration hazard

Product/substance	Result
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1
mineral oil	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1

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

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

SECTION 11: Toxicological information

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : No specific data.

Delayed and immediate effects as well as 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

Harmful to aquatic life with long lasting effects.

12.1 Toxicity

SECTION 12: Ecological information

Product/substance	Result	Species	Exposure	Test
Distillates (petroleum), hydrotreated light paraffinic	Acute EC50 >100 mg/l	Algae - *Pseudokirchnerella subcapitata*	72 hours	OECD 201
	Acute EC50 >10000 mg/l	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Chronic NOELR 10 mg/l	Daphnia - *Daphnia magna*	21 days	OECD 211
	Chronic NOELR >1000 mg/l	Fish - *Oncorhynchus mykiss*	21 days	-
mineral oil	Acute EC50 >100 mg/l	Algae - *Scenedesmus quadricauda*	72 hours	-
	Acute EC50 >10000 mg/l	Daphnia	48 hours	-
	Acute LC50 >100 mg/l	Fish - *Pimephales promelas*	96 hours	-
	Chronic NOEC >10 mg/l	Daphnia	21 days	-
Distillates (petroleum), hydrotreated light paraffinic	Acute EC50 >100 mg/l	Algae - *Pseudokirchnerella subcapitata*	48 hours	OECD 201
	Acute EC50 >10000 mg/l	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Chronic NOEL 10 mg/l	Daphnia - *Daphnia magna*	21 days	OECD 211
	Chronic NOEL >1000 mg/l	Fish - *Oncorhynchus mykiss*	21 days	-
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	Acute EC50 4.6 mg/l Fresh water	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Acute LL50 2.4 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	96 hours	OECD 203
	Acute NOEC 0.63 mg/l	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Acute NOELR 0.313 mg/l Fresh water	Algae - *Desmodesmus subspicatus*	72 hours	OECD 201
	Acute NOELR 1 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	96 hours	OECD 203
1,2-Propanediol, 3-amino-, N,N-dicoco alkyl derivs.	Acute EC50 16 mg/l	Algae	72 hours	-
	Acute EC50 230 mg/l	Daphnia	48 hours	-
	Acute LC50 >100 mg/l	Fish - *Oncorhynchus mykiss*	96 hours	-
	Acute NOEC 3.2 mg/l	Algae	72 hours	-
1-(tert-dodecylthio)propan-2-ol	Acute EC50 0.58 mg/l	Daphnia	48 hours	OECD 202
	Acute LC50 0.75 mg/l	Fish	96 hours	-
2-tetradecyloxirane, reaction products with boric acid	Acute EC50 >100 mg/l	Algae - *Selenastrum Capricornutum*	3 days	-
	Acute EC50 >100 mg/l	Daphnia - *Daphnia Magna*	2 days	-
	Acute LC50 >100 mg/l	Fish - *Rainbow Trout*	4 days	-
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	Acute EC50 0.03 mg/l	Algae - *Desmodesmus subspicatus static*	72 hours	OECD 201
	Acute EC50 0.163 mg/l	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Acute LC50 0.3 mg/l	Fish	96 hours	-
	Acute NOEC 0.011 mg/l	Daphnia	72 hours	-
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	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	-

SECTION 12: Ecological information

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
mineral oil	-	-	Not readily
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	-	-	Not readily
1,2-Propanediol, 3-amino-, N,N-dicoco alkyl derivs.	-	-	Not readily
1-(tert-dodecylthio)propan-2-ol	-	-	Not readily
2-tetradecyloxirane, reaction products with boric acid	-	-	Not readily
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	$LogP_{ow}$	BCF	Potential
Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich	4.1	28	Low
1,2-Propanediol, 3-amino-, N,N-dicoco alkyl derivs.	3.86	-	Low
1-(tert-dodecylthio)propan-2-ol	4.7	-	High
2-tetradecyloxirane, reaction products with boric acid	9.4	-	High
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	7.51	371.8	Low
2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	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 >= 0,1 %.

12.6 Endocrine disrupting properties

SECTION 12: Ecological information

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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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 05*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised 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 spilt 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.	9006	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Thiophene, tetrahydro-, 1,1-dioxide, 3-(C9-11-isoalkyloxy) derivs., C10-rich)	-	-

SECTION 14: Transport information

14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

Seveso Directive

This product is not controlled under the Seveso Directive.

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.
DIRECTIVE 2008/68/EC related on the inland transport of dangerous goods

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

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)	: All components are listed or exempted.
Canada inventory	: All components are listed or exempted.
China inventory (IECSC)	: Not determined.
Europe inventory	: All components are listed or exempted.
Japan inventory	: **Japan inventory (CSCL)**: All components are listed or exempted. **Japan inventory (ISHL)**: Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
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 : 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
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
Unique Formula Identifier (UFI)
UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

Procedure used to derive the classification

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications

SECTION 16: Other information

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

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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 : 089937

Product name : FLUIDMATIC XLD FE

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

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.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 2.Ai-I.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 1.00E+04

Fraction of EU tonnage used in region : 0.1
Fraction of Regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 300

Environment factors not influenced by risk management : Local freshwater dilution factor : 10
Local marine water dilution factor : 100

Other operational conditions of use affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 1.83E-11
Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Treat air emission to provide a typical removal efficiency of (%) : 70

Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

Organisational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.09
Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 3 663 016

Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

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:

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)

Industrial

Identification of the substance or mixture

Product definition	:	Mixture
Code	:	089937
Product name	:	FLUIDMATIC XLD FE

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
Processes and activities covered by the exposure scenario	:	Covers general use of lubricants and greases in vehiculs 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:

ATIEL-ATC SPERC 4.Bi.v1

Amounts used	:	Volume manufactured/imported (tonnes/year) : 2.63E+03 Fraction of EU tonnage used in region : 0.1 Fraction of Regional tonnage used locally : 0.1
Frequency and duration of use	:	Emission days (days per year) : 300
Environment factors not influenced by risk management	:	Local freshwater dilution factor : 10 Local marine water dilution factor : 100
Other operational conditions of use affecting environmental exposure	:	Negligible wastewater emissions as process operates without water contact. Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05 Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 1.83E-11 Release fraction to soil from process (after typical onsite RMMs): 0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.
Organisational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.09 Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 1 299 116

Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

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:

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	:	089937
Product name	:	FLUIDMATIC XLD FE

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
Processes and activities covered by the exposure scenario	:	Covers general use of lubricants and greases in vehiculs 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:

ATIEL-ATC SPERC 9.Bp.v1

Amounts used	:	Volume manufactured/imported (tonnes/year) : 5.39E+03 Fraction of EU tonnage used in region : 0.1 Fraction of Regional tonnage used locally : 0.1
Frequency and duration of use	:	Emission days (days per year) : 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor : 10 Local marine water dilution factor : 100
Other operational conditions of use affecting environmental exposure	:	Negligible wastewater emissions as process operates without water contact. Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 1.00E-04 Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 5.00E-04 Release fraction to soil from process (after typical onsite RMMs): 1.00E-03
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Prevent discharge of undissolved substance to or recover from onsite wastewater.
Organisational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.09 Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 14 659

Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

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:

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.