

NEVASTANE XMF 0

SDS # : 081228

previous revision date : 2022/08/03

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

1.1 Product identifier

Product name : NEVASTANE XMF 0

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

Identified uses
Use of lubricants and greases in open systems - Professional Extreme pressure Grease for incidental food contact Lubricating grease 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 Use of lubricants and greases in open systems - Industrial

1.3 Details of the supplier of the safety data sheet

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Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : National Toxicology Information Center (NTIC): + 421 2 5477 4166

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]

Aquatic Chronic 3, H412

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

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

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

2.2 Label elements

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 : 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 : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
White mineral oil (petroleum)	REACH #: 01-2119487078-27 EC: 232-455-8 CAS: 8042-47-5	≥ 75 - ≤ 90	Not classified.	-	[2]
(benzoato-O,O')hydroxy (octadecanoato-O,O') aluminium	REACH #: 01-2120127786-48 EC: 259-105-7 CAS: 54326-11-3	≤ 10	Not classified.	-	[2]

reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	REACH #: 01-2119480426-35 EC: 421-820-9 CAS: 192268-65-8 Index: 607-501-00-9	<1	Repr. 2, H361d Aquatic Chronic 4, H413	-	[1]
2,6-di-tert-butyl-p-cresol	REACH #: 01-2119555270-46 01-2119565113-46 EC: 204-881-4 CAS: 128-37-0	≤1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1 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. 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 recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. 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

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : 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, CO₂, 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 : 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.

Hazardous combustion products : ☒ carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides

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. Put on appropriate personal protective equipment.

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

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

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 ingest. Avoid contact with eyes, skin and clothing. 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. 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 unlabeled 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

Product/substance	Exposure limit values
White mineral oil (petroleum)	Government regulation SR c. 355/2006 (Slovakia, 9/2020) [oleje minerálne] Inhalation sensitizer. TWA 8 hours: 1 mg/m ³ (Mineral oils). Form: liquid aerosol, fumes. TWA 8 hours: 5 ppm (Mineral oils). Form: liquid aerosol, fumes. STEL 15 minutes: 3 mg/m ³ (Mineral oils). Form: liquid aerosol, fumes. STEL 15 minutes: 15 ppm (Mineral oils). Form: liquid aerosol, fumes.
(benzoato-O,O')hydroxy(octadecanoato-O,O') aluminium	Government regulation SR c. 355/2006 (Slovakia, 9/2020) [hliník, rozpustné soli] Inhalation sensitizer. TWA 8 hours: 2 mg/m ³ (Soluble salts of aluminum).

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
White mineral oil (petroleum)	DNEL	Long term Oral	25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	34.78 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	93.02 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	164.56 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	217.05 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.08 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.08 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.17 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.3 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1.2 mg/m ³	Workers	Systemic
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	DNEL	Long term Oral	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.435 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic
2,6-di-tert-butyl-p-cresol	DNEL	Long term Oral	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.435 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Fresh water	0.00044 mg/l	-
	Marine water	0.00044 mg/l	-
	Fresh water sediment	8.99 to 2250 mg/kg dwt	-
	Marine water sediment	0.899 to 225 mg/kg dwt	-
	Soil	1.79 mg/kg dwt	-
	Sewage Treatment Plant	32 mg/l	-
	Fresh water	199 ng/l	-
	Marine water	19.9 ng/l	-
	Fresh water sediment	458.19 µg/kg dwt	-
	Soil	53.9 µg/kg dwt	-
2,6-di-tert-butyl-p-cresol	Sewage Treatment Plant	17 µg/l	-
	Marine water sediment	45.82 µg/kg dwt	-
	Secondary Poisoning	16.67 mg/kg	-

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.
Non-skid safety shoes or boots

Respiratory protection : Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/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 : Solid.

Color : White.

Odor : Characteristic.

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

Melting point/freezing point : >200°C



Initial boiling point and boiling range	: Not applicable.
Flash point	: Open cup: Not applicable.
Flammability	: Yes.
Lower and upper explosion limit	: Not applicable.
Vapor pressure	: Not applicable.
Vapor density	: Not applicable.
Relative density	: 0.9
Density	: 0.9 g/cm ³ [20°C]
Solubility(ies)	:

Media	Result
water	Not soluble

Solubility in water	: ☒ 86 g/l
Miscible with water	: No.
Partition coefficient: n-octanol/ water	: >3.5
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: >200°C
Viscosity	: ☒ Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not applicable.

Particle characteristics

Median particle size	: Not available.
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9.2 Other information

No other relevant physical and chemical parameters for the safe use of the product

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
White mineral oil (petroleum)	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	Rat	>5000 mg/kg	-	-
(benzoato-O,O')hydroxy (octadecanoato-O,O') aluminium	LD50 Dermal	Rat	>2000 mg/kg	-	402 Read across
	LD50 Oral	Rat	>2000 mg/kg	-	OECD 420 Read across OECD 402
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-	EU B.1 Acute Toxicity (Oral)
2,6-di-tert-butyl-p-cresol	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>6000 mg/kg	-	OECD 401

Acute toxicity estimates

☒ A

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

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Eyes - Iris lesion	Rabbit	0	-	EU EU Method B.5
	Skin - Edema	Rabbit	0	4 hours	EU B.4 Acute Toxicity: Dermal Irritation/ corrosion
2,6-di-tert-butyl-p-cresol	Eyes - Cornea opacity	Rabbit	0	-	OECD 405 Read across
	Skin - Edema	Rabbit	0	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

Product/substance	Route of exposure	Species	Result
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	skin	Guinea pig	Not sensitizing

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

Product/substance	Test	Experiment	Result
Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

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

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

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

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

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 :
irritation
dryness
cracking

Ingestion : No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/substance	Result	Species	Dose	Exposure
Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Sub-chronic NOAEL Oral	Rat - Male, Female	50 mg/kg	13 weeks; 7 days per week

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

Product/substance	Result	Species	Exposure	Test
White mineral oil (petroleum) 2,6-di-tert-butyl-p-cresol	Acute EC50 >100 mg/l	Algae - <i>Pseudokirchnerella subcapitata</i>	48 hours	OECD 201
	Acute EC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	OECD 202
	Chronic NOEL 10 mg/l	Daphnia - <i>Daphnia magna</i>	21 days	OECD 211
	Chronic NOEL >1000 mg/l	Fish - <i>Oncorhynchus mykiss</i>	21 days	-
	Acute EC50 0.48 mg/l	Crustaceans - <i>Daphnia magna</i>	48 hours	OECD 202
	Acute EC50 1440 µg/l	Daphnia - <i>Daphnia pulex</i> - Neonate	48 hours	-
	Fresh water	Fish - <i>Oryzias latipes</i>	96 hours	OECD 203
	Acute LC50 1.1 mg/l	Algae - <i>Desmodesmus subspicatus</i>	72 hours	OECD 201
	Chronic EC10 0.4 mg/l	Daphnia - <i>Daphnia magna</i>	21 days	OECD 211
	Chronic NOEC 0.07 mg/l	Fish - <i>Danio rerio</i>	30 days	OECD 210

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
2,6-di-tert-butyl-p-cresol	OECD 301C	4.5 % - Not readily - 28 days	-	Activated sludge

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
benzoato-O,O')hydroxy (octadecanoato-O,O') aluminium reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives 2,6-di-tert-butyl-p-cresol	- - -	- - -	Readily Inherent Not readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
NEVASTANE XMF 0 White mineral oil (petroleum) reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives 2,6-di-tert-butyl-p-cresol	>3.5 >6 4.8 to 8.8 5.1	- - 842 to 2194 1277	Low High High High

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 has no 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. Should not be released into the environment.

Hazardous waste : Yes.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 12 01 12*

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.	9005	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN (2,6-di-tert-butyl-p-cresol)	-	-
14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

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

Additional information

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

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

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

National regulatory information

Act No 67/2010 Coll. on Conditions of Marketing of Chemical Substances and Chemical Mixtures (Chemical Act).
Act No 124/2006 Coll. on Occupational Safety and Health Protections
Act No 355/2007 Coll. on Protection, Support, and Development of Public Health
Act No. 79/2015 Coll. on wastes
Act No. 314/2011 Coll. on fire protection
Act No. 146/2023 Coll. on protection of air

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

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

15.2 Chemical Safety Assessment : 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 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
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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
 UFI = Unique Formula Identifier
 UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

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

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H361d H400 H410 H412 H413	Suspected of damaging the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life.
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Full text of classifications [CLP/GHS]

Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Aquatic Chronic 4 Repr. 2	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 4 TOXIC TO REPRODUCTION - Category 2
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Date of revision : 2024/11/04

previous revision date : 2022/08/03

Version : 3

Notice to reader



TotalEnergies

NEVASTANE XMF 0

SDS # : 081228

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)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 081228
Product name : NEVASTANE XMF 0

Section 1 - Title

Short title of the exposure scenario : Use of lubricants and greases in open systems - Professional
List of use descriptors : **Identified use name:** Use of lubricants and greases in open systems - Professional
Process Category: PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d

Processes and activities covered by the exposure scenario : Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mold releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 8.Cp.v1

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
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant):1
Release fraction to soil from process (after typical onsite RMMs): 1

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.

Organizational 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
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03

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 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 : 081228
Product name : NEVASTANE XMF 0

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) : 22

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-02
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 2.00E-01
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.

Organizational 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
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03

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 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 : 081228
Product name : NEVASTANE XMF 0

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 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:

ATIEL-ATC SPERC 4.Bi.v1

Amounts used : Annual site tonnage (tonnes/year): 16.5
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) : 1.00E-01
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 2.00E-01
Release fraction to soil from process (after typical onsite RMMs): 1
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.
Organizational 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
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03

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 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)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 081228
Product name : NEVASTANE XMF 0

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 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:

ATIEL-ATC SPERC 9.Bp.v1

Amounts used	: Volume manufactured/imported (tonnes/year) : 27.5
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) : 0 Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 0 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.
Organizational 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 Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03

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 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 : 081228
Product name : NEVASTANE XMF 0

Section 1 - Title

Short title of the exposure scenario : Use of lubricants and greases in open systems - Industrial
List of use descriptors : **Identified use name:** Use of lubricants and greases in open systems - Industrial
Process Category: PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04

Processes and activities covered by the exposure scenario : Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mold releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 4.Ci.v1

Amounts used : Annual site tonnage (tonnes/year) : 16.5

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) : 1.00E-01
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 2.00E-01
Release fraction to soil from process (after typical onsite RMMs): 1

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.

Organizational 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
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03

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 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.