# SAFETY DATA SHEET

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

# NEVASTANE XS 220

**SDS # :** 084860

**previous revision date** : 2022/09/09

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

### 1.1 Product identifier

**Product name** : NEVASTANE XS 220

**UFI** : 9M0K-D7HG-Y008-2MER

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

| Identified uses |
|---|
| grease<br>Formulation additives, lubricants and greases - Industrial<br>General use of lubricants and greases in vehicles or machinery - Industrial<br>General use of lubricants and greases in vehicles or machinery - Professional<br>Use of lubricants and greases in open systems - Industrial<br>Use of lubricants and greases in open systems - Professional |

### 1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
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DEUTSCHLAND
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msds@totalenergies.com

**Contact**

HSE : + 49 (0) 30/ 2027-9429

### 1.4 Emergency telephone number

**National advisory body/Poison Center**

**Telephone number** : Giftnotruf Berlin, Tel.+49 (0)30 19240 (24 h erreichbar, Beratung in Deutsch und Englisch

**Supplier**

**Telephone number** : TOTAL Emergency number: +49 89 220 61012

## 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]**

Eye Irrit. 2, H319

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.

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

### 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Warning

**Hazard statements** : H319 - Causes serious eye irritation.

**Precautionary statements**

**Prevention** : P280 - Wear eye or face protection.

**Response** : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Not applicable.

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

### 2.3 Other hazards

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

**Other hazards which do not result in classification** : 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 |
|---|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | REACH #: 01-2119560592-37<br>EC: 932-231-6<br>CAS: 1335202-81-7 | <3 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Chronic 3, H412 | - | [1] |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | REACH #: 01-2119491299-23<br>EC: 270-128-1<br>CAS: 68411-46-1 | ≤1 | Repr. 2, H361f<br><br>**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 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

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

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

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

### 4.2 Most important symptoms and effects, both acute and delayed

**Over-exposure signs/symptoms**

| | | |
|---|---|---|
| **Eye contact** | : | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| **Inhalation** | : | No specific data. |
| **Skin contact** | : | Adverse symptoms may include the following:<br>irritation<br>dryness<br>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** | : | No specific fire or explosion hazard. |
| **Hazardous combustion products** | : | carbon monoxide<br>carbon dioxide<br>nitrogen oxides<br>sulfur oxides<br>Hydrogen sulfide<br>Mercaptans |

### 5.3 Advice for firefighters

| | | |
|---|---|---|
| **Special protective actions for fire-fighters** | : | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| **Special protective equipment for fire-fighters** | : | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| **For non-emergency personnel** | : | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| **For emergency responders** | : | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

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

**6.3 Methods and materials for containment and cleaning up**

**Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material 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. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Shelf life: 36 months. 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. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

**Recommendations** : See exposure scenarios

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

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**Occupational exposure limits**

No exposure limit value known.

**Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)**

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: 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 |
|---|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | DNEL | Long term Dermal | 1.7 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 85 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 89 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1.7 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 85 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Oral | 89 mg/kg bw/day | General population | Systemic |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | DNEL | Long term Oral | 0.04 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0.04 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0.08 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 0.14 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 0.6 mg/m³ | Workers | Systemic |

**PNECs**

| Product/ingredient name | Compartment Detail | Name | Method Detail |
|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | Fresh water | 23 µg/l | - |
| | Marine water | 2.3 µg/l | - |
| | Sewage Treatment Plant | 3 mg/l | - |
| | Fresh water sediment | 174 µg/kg dwt | - |
| | Marine water sediment | 17.4 µg/kg dwt | - |
| | Soil | 620 µg/kg dwt | - |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | Fresh water | 33.8 µg/l | - |
| | Marine water | 3.38 µg/l | - |
| | Fresh water sediment | 446 µg/kg dwt | - |
| | Marine water sediment | 44.6 µg/kg dwt | - |
| | Soil | 1.76 mg/kg dwt | - |

### 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** : 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** | : Solid. | |
| **Color** | : Brown.Clear. | |
| **Odor** | : Characteristic. | |
| **pH** | : Not applicable. | Product is non-soluble (in water). |
| **Melting point/freezing point** | : >300°C [ISO 3016] | |

| | | |
|---|---|---|
| **Initial boiling point and boiling range** | : | >300°C |
| **Flash point** | : | Not applicable. |
| **Flammability** | : | Not applicable. |
| **Lower and upper explosion limit** | : | Not applicable. |
| **Vapor pressure** | : | Not applicable. |
| **Vapor density** | : | Not applicable. |
| **Relative density** | : | 0.9 [ISO 12185] |
| **Density** | : | 0.9 g/cm³ [20°C] [ISO 12185] |
| **Solubility(ies)** | : | |

| Media | Result |
|---|---|
| water | Not soluble |

| | | |
|---|---|---|
| **Miscible with water** | : | No. |
| **Partition coefficient: n-octanol/ water** | : | >3.5 |
| **Auto-ignition temperature** | : | Not applicable. |
| **Decomposition temperature** | : | >300°C |
| **Viscosity** | : | Kinematic (40°C): Not applicable. |
| **Particle characteristics** | | |
| **Median particle size** | : | Not available. |

### 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** : carbon monoxide
carbon dioxide
nitrogen oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

## 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 |
|---|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - | OECD 402 Read across |
| | LD50 Oral | Rat - Female | 4445 mg/kg | - | - |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | LD50 Oral | Rat | >2500 mg/kg | - | - |

**Acute toxicity estimates**

| Product/substance | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | 4445 | N/A | N/A | N/A | N/A |

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

**Irritation/Corrosion**

| Product/substance | Result | Species | Score | Exposure | Test |
|---|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | Eyes - Irritant | Rabbit | 1 | - | OECD 405 |
| | Skin - Erythema/Eschar | Rabbit | 2.7 | 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 met.

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

**Sensitization**

| Product/substance | Route of exposure | Species | Result |
|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | 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**

**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** : Causes serious eye irritation.

**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** : Adverse symptoms may include the following:
pain or irritation
watering
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
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**

Not available.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

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

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/substance | Result | Species | Exposure | Test |
|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | Acute EC50 29 mg/l | Algae - *Pseudokirchneriella subcapitata* | 96 hours | STDMETH, ASTM and USEPA 201 |
| | Acute EC50 2.9 mg/l | Crustaceans - *Daphnia magna* | 48 hours | OECD 202 |
| | Acute LC50 1.67 mg/l | Fish - *Lepomis macrochirus* | 96 hours | STDMETH, ASTM and USEPA |
| | Chronic NOEC 0.5 mg/l | Algae - *Pseudokirchneriella subcapitata* | 96 hours | STDMETH, ASTM and USEPA 201 |
| | Chronic NOEC 0.379 mg/l | Daphnia | 48 hours | OECD 211 |

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

| Product/substance | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | OECD 301B | >90 % - Readily - 28 days | - | Activated sludge |

**Conclusion/Summary** : Not available.

| Product/substance | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | - | - | Readily |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | - | - | Not readily |

### 12.3 Bioaccumulative potential

| Product/substance | $LogK_{ow}$ | BCF | Potential |
|---|---|---|---|
| NEVASTANE XS 220 | >3.5 | - | Low |
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | 2.89 | - | Low |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | 5.1 | 1730 | 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 >= 0,1 %.

### 12.6 Endocrine disrupting properties

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

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 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. | Not regulated. | Not regulated. | Not regulated. |
| **14.2 UN proper shipping name** | - | - | - | - |
| **14.3 Transport hazard class(es)** | - | - | - | - |
| **14.4 Packing group** | - | - | - | - |
| **14.5 Environmental hazards** | No. | No. | No. | No. |

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

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

## SECTION 15: Regulatory information

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

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

**Annex XIV - List of substances subject to authorization**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

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

**Other EU regulations**

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

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

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

**Explosive precursors** : Not applicable.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

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

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**National regulations**

**Storage class (TRGS 510)** : 13

Take into account special provisions for the storage of flammable liquids in portable tanks according to TRGS 510

**Hazardous incident ordinance**

This product is not controlled under the Germany Hazardous Incident Ordinance.

**Hazard class for water** : 2

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 40.3%
TA-Luft Class I - Number 5.2.5: 36.7%
TA-Luft Number 5.2.1: 23%

**Employment law** : Law on the protection of young workers
Regulation on the complementary implementation of the EC Directive on Maternity Protection (MuSchRiV - Maternity Protection Directive Regulation)

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**LU - Luxembourg prohibited chemicals in the workplace**

Not listed.

**Inventory list**

| | |
|---|---|
| **Australia inventory (AIIC)** | : All components are listed or exempted. |
| **Canada inventory (DSL/NDSL)** | : All components are listed or exempted. |
| **China inventory (IECSC)** | : All components are listed, exempted, or notified. |
| **Europe inventory (EC)** | : All components are listed or exempted. |
| **Japan inventory** | : **Japan inventory (CSCL)**: Not determined.<br>**Japan inventory (ISHL)**: At least one component is not listed. |
| **New Zealand Inventory of Chemicals (NZIoC)** | : All components are listed or exempted. |
| **Philippines inventory (PICCS)** | : At least one component is not listed. |
| **Korea inventory (KECI)** | : All components are listed or exempted. |
| **Taiwan Chemical Substances Inventory (TCSI)** | : All components are listed, exempted, or notified. |
| **Thailand inventory** | : Not determined. |
| **Turkey inventory** | : At least one component is not listed. |
| **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** : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
vPvB = Very Persistent and Very Bioaccumulative
PNEC = Predicted No Effect Concentration
LC50 = Median lethal concentration
LD50 = Median lethal dose
OEL = Occupational Exposure Limit
VOC = Volatile Organic Compound
UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
NOEC No Observed Effect Concentration
QSAR = Quantitative Structure–Activity Relationship
Unique Formula Identifier (UFI)

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

| Classification | Justification |
|---|---|
| Eye Irrit. 2, H319 | Calculation method |

**Full text of abbreviated H statements**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H361f | Suspected of damaging fertility. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Full text of classifications [CLP/GHS]**

| | |
|---|---|
| Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Eye Dam. 1 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Eye Irrit. 2 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 |
| Repr. 2 | TOXIC TO REPRODUCTION - Category 2 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |

**Date of revision** : 2023/09/18
**previous revision date** : 2022/09/09
**Version** : 4

**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** : 084860

**Product name** : NEVASTANE XS 220

## Section 1 - Title

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

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

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

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

## Section 2 - Exposure controls

**Contributing scenario controlling environmental exposure for 1:**

No exposure scenario required

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

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

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

**Amounts used** : Not applicable.

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

**Human factors not influenced by risk management** : Not applicable.

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

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

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

**Contributing scenario controlling worker exposure for 3: General exposures Use in contained systems Elevated temperature**

No other specific measures identified.

**Contributing scenario controlling worker exposure for 4: Mixing operations Closed systems Batch processes at elevated temperatures**

| | | |
|---|---|---|
| **Ventilation control measures** | : | Provide extract ventilation to points where emissions occur. |

**Contributing scenario controlling worker exposure for 5: Mixing operations Open systems Batch processes at elevated temperatures**

| | | |
|---|---|---|
| **Frequency and duration of use/exposure** | : | Avoid carrying out activities involving exposure for more than 4 hours per day. |
| **Ventilation control measures** | : | Provide extract ventilation to points where emissions occur. |

**Contributing scenario controlling worker exposure for 6: Mixing operations (open systems)**

| | | |
|---|---|---|
| **Ventilation control measures** | : | Provide extract ventilation to points where emissions occur. |

**Contributing scenario controlling worker exposure for 7: Process sampling**

| | | |
|---|---|---|
| **Frequency and duration of use/exposure** | : | Avoid carrying out activities involving exposure for more than 1 hour per day. |

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

| | | |
|---|---|---|
| **Personal protection** | : | Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. |

**Contributing scenario controlling worker exposure for 8: Bulk transfers Dedicated facility**

| | | |
|---|---|---|
| **Frequency and duration of use/exposure** | : | Avoid carrying out activities involving exposure for more than 4 hours per day. |

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

| | | |
|---|---|---|
| **Personal protection** | : | Wear chemical-resistant gloves (tested to EN374) in combination with intensive management supervision controls. |

**Contributing scenario controlling worker exposure for 9: Drum/batch transfers Dedicated facility**

| | | |
|---|---|---|
| **Ventilation control measures** | : | Provide extract ventilation to points where emissions occur. |

**Contributing scenario controlling worker exposure for 10: Drum/batch transfers Non-dedicated facility**

| | | |
|---|---|---|
| **Frequency and duration of use/exposure** | : | Avoid carrying out activities involving exposure for more than 1 hour per day. |
| **Ventilation control measures** | : | Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour). |

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

| | | |
|---|---|---|
| **Personal protection** | : | Wear chemical-resistant gloves (tested to EN374) in combination with intensive management supervision controls. |

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

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

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

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

**Advice on general occupational hygiene** : Clear spills immediately.

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

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

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

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

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

**Contributing scenario controlling worker exposure for 13: Laboratory activities**

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

**Contributing scenario controlling worker exposure for 14: Storage**

**Engineering controls** : Store substance within a closed system.

## Section 3 - Exposure estimation and reference to its source

**Website:** : Not applicable.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

| | | |
|---|---|---|
| **Exposure assessment (human):** | : | The risk Management 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** : 084860

**Product name** : NEVASTANE XS 220

## Section 1 - Title

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

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

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

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

No exposure scenario required

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

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

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

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

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

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

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

**Personal protection** : Use suitable eye protection.

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

No other specific measures identified.

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

No other specific measures identified.

**Contributing scenario controlling worker exposure for 5: Initial factory fill of equipment Open systems**

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

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

**Contributing scenario controlling worker exposure for 6: Operation of equipment containing engine oils and similar Use in contained systems**

No other specific measures identified.

**Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance**

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

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

**Ventilation control measures** : Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

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

**Contributing scenario controlling worker exposure for 8: Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature)**

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

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

**Ventilation control measures** : Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely.

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

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

**Contributing scenario controlling worker exposure for 9: Storage**

**Engineering controls** : Store substance within a closed system.

## Section 3 - Exposure estimation and reference to its source

**Website:** : Not applicable.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

## Additional good practice advice beyond the REACH CSA

| | | |
|---|---|---|
| **Environment** | : | Not available. |
| **Health** | : | Not available. |

## Annex to the extended Safety Data Sheet (eSDS)

**Professional**

## Identification of the substance or mixture

**Product definition** : Mixture

**Code** : 084860

**Product name** : NEVASTANE XS 220

## Section 1 - Title

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

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

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

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

No exposure scenario required

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

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

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

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

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

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

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

**Personal protection** : Use suitable eye protection.

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

No other specific measures identified.

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

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

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

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

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

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

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

**Contributing scenario controlling worker exposure for 6: Storage**

**Engineering controls** : Store substance within a closed system.

## Section 3 - Exposure estimation and reference to its source

**Website:** : Not applicable.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

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

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

## Additional good practice advice beyond the REACH CSA

| | | |
|---|---|---|
| **Environment** | : | Not available. |
| **Health** | : | Not available. |

## Annex to the extended Safety Data Sheet (eSDS)

**Industrial**

## Identification of the substance or mixture

**Product definition** : Mixture

**Code** : 084860

**Product name** : NEVASTANE XS 220

## 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

**Health Contributing scenarios** : **General measures applicable to all activities**
**Material transfers Manual -** PROC08b
**Material transfers Automated process with (semi) closed systems -** PROC08b, PROC09
**Roller, spreader, flow application -** PROC10
**Spraying -** PROC07
**Treatment of articles by dipping and pouring -** PROC13
**Equipment cleaning and maintenance -** PROC08b
**Storage -** PROC01, PROC02

**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:**

No exposure scenario required

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

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

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

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

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

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

**Advice on general occupational hygiene** : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. Avoid direct eye contact with product, also via contamination on hands.

**Personal protection** : Use suitable eye protection.

**Contributing scenario controlling worker exposure for 3: Material transfers Manual**

**Frequency and duration of use/exposure** : Avoid carrying out activities involving exposure for more than 1 hour per day.

**Contributing scenario controlling worker exposure for 4: Material transfers Automated process with (semi) closed systems**

**Ventilation control measures** : Ensure material transfers are under containment or extract ventilation.

**Contributing scenario controlling worker exposure for 5: Roller, spreader, flow application**

**Ventilation control measures** : Provide extract ventilation to points where emissions occur.

**Contributing scenario controlling worker exposure for 6: Spraying**

**Ventilation control measures** : Carry out in a vented booth or extracted enclosure.

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

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

**Contributing scenario controlling worker exposure for 7: Treatment of articles by dipping and pouring**

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

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

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

**Contributing scenario controlling worker exposure for 8: Equipment cleaning and maintenance**

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

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

**Ventilation control measures** : Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

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

**Contributing scenario controlling worker exposure for 9: Storage**

**Engineering controls** : Store substance within a closed system.

## Section 3 - Exposure estimation and reference to its source

**Website:** : Not applicable.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 3: Material transfers Manual**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 4: Material transfers Automated process with (semi) closed systems**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 5: Roller, spreader, flow application**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 6: Spraying**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 7: Treatment of articles by dipping and pouring**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 8: Equipment cleaning and maintenance**

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Health** : Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction.

## Additional good practice advice beyond the REACH CSA

| | | |
|---|---|---|
| **Environment** | : | Not available. |
| **Health** | : | Not available. |

## Annex to the extended Safety Data Sheet (eSDS)

**Professional**

## Identification of the substance or mixture

**Product definition** : Mixture

**Code** : 084860

**Product name** : NEVASTANE XS 220

## 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

**Health Contributing scenarios** : **General measures applicable to all activities**
**Material transfers Manual -** PROC08a
**Roller, spreader, flow application -** PROC10
**Spraying -** PROC11
**Treatment of articles by dipping and pouring -** PROC13
**Equipment cleaning and maintenance -** PROC08a
**Storage -** PROC01, PROC02

**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:**

No exposure scenario required

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

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

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

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

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

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

**Advice on general occupational hygiene** : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. Avoid direct eye contact with product, also via contamination on hands.

**Personal protection** : Use suitable eye protection.

**Contributing scenario controlling worker exposure for 3: Material transfers Manual**

**Frequency and duration of use/exposure** : Avoid carrying out activities involving exposure for more than 1 hour per day.

**Contributing scenario controlling worker exposure for 4: Roller, spreader, flow application**

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

**Ventilation control measures** : Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour) Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

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

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

**Contributing scenario controlling worker exposure for 5: Spraying**

**Frequency and duration of use/exposure** : Avoid carrying out activities involving exposure for more than 1 hour per day.

**Ventilation control measures** : Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour) Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

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

**Personal protection** : Wear suitable coveralls to prevent exposure to the skin. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

**Respiratory protection** : Wear a respirator conforming to EN140 with type A/P2 filter or better.

**Contributing scenario controlling worker exposure for 6: Treatment of articles by dipping and pouring**

**Ventilation control measures** : Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour) Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

**Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance**

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

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

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

**Ventilation control measures** : Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour) Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

**Contributing scenario controlling worker exposure for 8: Storage**

**Engineering controls** : Store substance within a closed system.

## Section 3 - Exposure estimation and reference to its source

**Website:** : Not applicable.

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

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 3: Material transfers Manual**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 4: Roller, spreader, flow application**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 5: Spraying**

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 6: Treatment of articles by dipping and pouring**

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Exposure estimation and reference to its source** : Not available.

**Exposure estimation and reference to its source - Workers: 8: Storage**

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

**Exposure estimation and reference to its source** : Not available.

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

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

**Health** : Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction.

## Additional good practice advice beyond the REACH CSA

**Environment** : Not available.

**Health** : Not available.