

Section 1. Identification

Product identifier : CERAN XM 460

Recommended use of the chemical and restrictions on use

Identified uses

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
Use of lubricants and greases in open systems - Professional

Supplier's details : TotalEnergies Lubrifiants
562 Avenue du Parc de L'île
92029 Nanterre Cedex FRANCE
Tél: +33 (0)1 41 35 40 00
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182 Cecil Street
#27-01 Frasers Tower
Singapore 069547
Tel: +65 6879 2200
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See section 16 to have the contact details of the local supplier

Emergency telephone number :
Asia-Pacific: +65 3158 1074
Middle-East: +44 1235 239671

Section 2. Hazard identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 3
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : H316 - Causes mild skin irritation.
H319 - Causes serious eye irritation.

Precautionary statements

Prevention : Wear eye or face protection. Wash thoroughly after handling.
Response : If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.



Storage : Not applicable.

Disposal : Not applicable.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % (w/w) | Identifiers |
|---|---------|--------------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | ≤10 | 68584-23-6 |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | ≤3 | 70024-69-0 |
| Sulfonic acids, petroleum, calcium salts | ≤3 | 61789-86-4 |
| calcium(2+) 12-hydroxyoctadecanoate | ≤3 | 3159-62-4 |
| Benzenesulfonic acid, dodecyl-, calcium salt | <2.5 | 1335202-81-7 |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | ≤1 | 68411-46-1 |
| C14-16-18 Alkyl phenol | ≤0.3 | - |

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation. Defatting to the skin.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- 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
 - redness
 - dryness
 - cracking
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : carbon monoxide
carbon dioxide
Silicon Dioxide
nitrogen oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

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.

Section 6. Accidental release measures

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".

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).

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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

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.

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.

**Section 8. Exposure controls/personal protection****Control parameters****Occupational exposure limits UN**

| Product/substance | Exposure limit values |
|---|---|
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | ACGIH TLV (United States). TWA: 3 mg/m ³ Form: Respirable dust TWA: 10 mg/m ³ Form: Total dust |

Occupational exposure limits Hong Kong

| Product/substance | Exposure limit values |
|---|---|
| Residual oils (petroleum), hydrotreated | Labour Department, OS&H Branch (Hong Kong, 4/2002). [Oil mist, mineral] STEL: 10 mg/m ³ 15 minutes. TWA: 5 mg/m ³ 8 hours. |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | Labour Department, OS&H Branch (Hong Kong, 4/2002). [Oil mist, mineral] STEL: 10 mg/m ³ 15 minutes. TWA: 5 mg/m ³ 8 hours. |

Occupational exposure limits India

| Product/substance | Exposure limit values |
|---|--|
| Residual oils (petroleum), hydrotreated | ACGIH TLV (United States, 1/2021). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | ACGIH TLV (United States, 1/2021). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction |

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.
- 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)

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 eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

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
Fluorinated rubber
nitrile 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.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

- Physical state** : Solid.
- Color** : Light brown.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : 300°C (572°F)
- Boiling point** : Not applicable.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Not applicable.
- Vapor pressure** : Not applicable.
- Vapor density** : Not applicable.
- Relative density** : 0.9 [ISO EN 3675]
- Density** : 0.9 g/cm³ [20°C] [ISO EN 3675]
- 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 (>572°F) |
| Viscosity | : Kinematic (room temperature): 460 mm ² /s (460 cSt) Kinematic (40°C (104°F)): Not applicable. |
| Flow time (ISO 2431) | : Not available. |
| Particle characteristics | |
| Median particle size | : Not available. |

Section 10. Stability and reactivity

| | |
|---|--|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : Stable under recommended storage and handling conditions (see Section 7). |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : No specific data. |
| Incompatible materials | : Strong oxidizing agents |
| Hazardous decomposition products | : carbon monoxide carbon dioxide Silicon Dioxide nitrogen oxides sulfur oxides Hydrogen sulfide Mercaptans |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/substance | Result | Species | Dose | Exposure | Test |
|--|---------------------------------|-----------------------|-------------|----------|--|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | LC50 Inhalation Dusts and mists | Rat - Male, Female | >1.9 mg/l | 4 hours | EPA OPP 81-3 Acute Inhalation Toxicity OECD |
| | LD50 Dermal | Rabbit - Male, Female | >4000 mg/kg | - | |
| | LD50 Oral | Rat - Male, Female | >5000 mg/kg | - | OECD 401 Read across |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | LC50 Inhalation Dusts and mists | Rat - Male, Female | >1.9 mg/l | 4 hours | EPA OPP 81-3 Acute Inhalation Toxicity Read across |
| | LD50 Dermal | Rabbit - Male, | >5000 mg/kg | - | OECD 402 |



| | | | | | |
|---|---------------------------------|---------------------------------|--------------|---------|--|
| Sulfonic acids, petroleum, calcium salts | LD50 Oral | Female Rat - Male, Female | >5000 mg/kg | - | OECD 401 |
| | LC50 Inhalation Dusts and mists | Rat - Male | >1.9 mg/l | 4 hours | EPA OPP 81-3 Acute Inhalation Toxicity |
| calcium(2+) 12-hydroxyoctadecanoate | LD50 Dermal | Rabbit - Male, Female | >4000 mg/kg | - | - |
| | LD50 Oral | Rat - Male | >16000 mg/kg | - | Section 772 . 112-21 CFR 40 |
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - | OECD 402 |
| | LD50 Oral | Rat - Female | >2000 mg/kg | - | OECD 420 |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - | OECD 402 |
| | LD50 Oral | Rat - Female | 4445 mg/kg | - | Read across |
| C14-16-18 Alkyl phenol | LD50 Oral | Rat | >5000 mg/kg | - | - |
| | LD50 Dermal | Rat | 2000 mg/kg | - | - |
| | LD50 Oral | Rat | 2000 mg/kg | - | - |

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

Irritation/Corrosion

| Product/substance | Result | Species | Score | Exposure | Test |
|---|---|---------|-------|----------|--|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | Eyes - Cornea opacity | Rabbit | 0 | - | EPA |
| | Skin - Edema | Rabbit | 0.3 | 4 hours | EPA OPPTS 870.2500 Acute Dermal Irritation |
| | Skin - Primary dermal irritation index (PDII) | Rabbit | 0.5 | 4 hours | OECD |
| calcium(2+) 12-hydroxyoctadecanoate | Eyes - Cornea opacity | Rabbit | 0 | - | OECD 405 |
| | Eyes - Irritant | Rabbit | 1 | - | OECD 405 |
| | Skin - Erythema/Eschar | Rabbit | 2.7 | 4 hours | OECD 404 |

Skin : Based on available data, the classification criteria are 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, C10-16-alkyl derivs., calcium salts | skin | Human | Sensitizing |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | skin | Mouse | Sensitizing |
| Sulfonic acids, petroleum, calcium salts | skin | Guinea pig | Sensitizing |
| calcium(2+) | skin | Mouse | Not sensitizing |



| | | | |
|---|------|------------|-----------------|
| 12-hydroxyoctadecanoate Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | skin | Guinea pig | Not sensitizing |
|---|------|------------|-----------------|

Skin : Based on available data, the classification criteria are not met. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required Contains sensitizer May produce an allergic reaction.

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

Mutagenicity

| Product/substance | Test | Experiment | Result |
|---|----------|--|----------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal | Negative |
| | OECD 474 | Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic | Negative |
| calcium(2+) 12-hydroxyoctadecanoate | - | Experiment: In vivo Subject: Mammalian-Animal | Negative |
| | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic | Negative |
| | OECD 473 | Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic | 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

| Product/substance | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|---|-------------------|-----------|-------------------|--------------------|--------|----------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | Negative | Negative | Negative | Rat - Male, Female | Oral | - |
| calcium(2+) 12-hydroxyoctadecanoate | - | Negative | Negative | Rat - Male, Female | Dermal | - |

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

Not available.

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

Specific target organ toxicity (repeated exposure)



| Name | Category | Route of exposure | Target organs |
|------------------------|------------|-------------------|---------------|
| C14-16-18 Alkyl phenol | Category 2 | - | liver |

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

Aspiration hazard

Not available.

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** : Causes mild skin irritation. Defatting to the skin.
- 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
redness
dryness
cracking
- Ingestion** : No specific data.

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

Short term exposure

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

Long term exposure

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

Potential chronic health effects

| Product/substance | Result | Species | Dose | Exposure |
|---|----------------------------------|--------------------|----------------------|----------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | Sub-acute NOAEL Dermal | Rat - Male, Female | >1000 mg/kg | - |
| | Sub-acute NOAEL Oral | Rat - Male, Female | 500 mg/kg | - |
| | Sub-acute NOAEL Inhalation Vapor | Rat - Male, Female | 50 mg/m ³ | 28 days |
| calcium(2+) 12-hydroxyoctadecanoate | Sub-chronic NOAEL Dermal | Rat - Male, Female | 1000 mg/kg | - |



| | |
|------------------------------|---|
| 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. |

Numerical measures of toxicity**Acute toxicity estimates**

| Product/substance | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|------------------|----------------|--------------------------|----------------------------|-------------------------------------|
| CERAN XM 460 calcium(2+) 12-hydroxyoctadecanoate | 111111.1 2500 | N/A N/A | N/A N/A | N/A N/A | N/A N/A |

Other information : Not available.

Section 12. Ecological information**Toxicity**

| Product/substance | Result | Species | Exposure | Test |
|--|-------------------------|---|----------|----------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | Acute EC50 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| | Acute EC50 >1000 mg/l | Crustaceans - Daphnia magna | 48 hours | OECD 202 |
| | Acute LC50 >1000 mg/l | Fish - Cyprinodon variegatus | 96 hours | OECD 203 |
| | Chronic EC10 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | Acute EC50 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| | Acute EC50 >1000 mg/l | Crustaceans - Daphnia magna | 48 hours | OECD 202 |
| | Acute LC50 >1000 mg/l | Fish - Cyprinodon variegatus | 96 hours | OECD 203 |
| | Chronic EC10 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| Sulfonic acids, petroleum, calcium salts | Acute EC50 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| | Acute EC50 >1000 mg/l | Crustaceans - Daphnia magna | 48 hours | OECD 202 |
| | Acute LC50 >1000 mg/l | Fish - Cyprinodon variegatus | 96 hours | OECD 203 |
| | Chronic EC10 >1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours | OECD 201 |
| calcium(2+) 12-hydroxyoctadecanoate | Acute EC50 161 mg/l | Algae | 72 hours | - |
| | Acute EC50 >100 mg/l | Daphnia - Daphnia magna | 48 hours | - |



| | | | | |
|---|-------------------------|---|----------|-----------------------------|
| 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 |
| C14-16-18 Alkyl phenol | Chronic NOEC 0.379 mg/l | Daphnia | 48 hours | OECD 211 |
| | Acute EC50 >100 mg/l | Daphnia - Daphnia magna | 48 hours | OECD 202 |

Persistence and degradability

| Product/substance | Test | Result | Dose | Inoculum |
|--|-----------|-----------------------------|------|------------------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | OECD 301D | 0 % - Not readily - 28 days | - | Activated sludge |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | OECD 301D | 0 % - Not readily - 28 days | - | Activated sludge |
| Sulfonic acids, petroleum, calcium salts | OECD 301D | 0 % - Not readily - 28 days | - | Activated sludge |
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | OECD 301B | >90 % - Readily - 28 days | - | Activated sludge |

| Product/substance | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | - | - | Not readily |
| Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts | - | - | Not readily |
| Sulfonic acids, petroleum, calcium salts | - | - | Not readily |
| Benzenesulfonic acid, C10-13-alkyl derivs., Ca Salt | - | - | Readily |
| Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | - | - | Not readily |

Bioaccumulative potential

| Product/substance | LogK _{ow} | BCF | Potential |
|---|--------------------|------|-----------|
| CERAN XM 460 | >3.5 | - | low |
| Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts | 22 | - | high |
| 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 |

Mobility in soil



- Soil/water partition coefficient (K_{oc})** : 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.
- Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 | IMDG | ICAO/IATA |
|-----------------------------------|----------------|----------------|----------------|
| UN/ID No | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - |
| Transport hazard class(es) | - | - | - |
| Packing group | - | - | - |
| Environmental hazards | No. | No. | No. |

ICAO/IATA

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | |
|--|---|
| Australia inventory (AIIC) | : All components are listed or exempted. |
| Canada inventory (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) : Not determined. |
| New Zealand Inventory of Chemicals (NZIoC) | : All components are listed or exempted. |
| Philippines inventory (PICCS) | : All components are listed or exempted. |
| Korea inventory (KECI) | : All components are listed or exempted. |
| Taiwan Chemical Substances Inventory (TCSI) | : All components are listed or exempted. |
| Thailand inventory | : Not determined. |
| Turkey inventory | : Not determined. |
| United States inventory (TSCA 8b) | : All components are listed or exempted. |
| Vietnam inventory | : Not determined. |

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

Section 16. Other informationHistory**Date of revision** : 2023/06/14**previous revision date** : 2022/09/30**Version** : 1.02Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|--|--------------------|
| SKIN CORROSION/IRRITATION - Category 3 | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A | Calculation method |



TotalEnergies

CERAN XM 460

SDS # : 080302

Additional details on the supplier of the product

| | | | |
|--|--|---|--|
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References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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