

Section 1. Identification of the substance/mixture and of the company/undertaking

GHS product identifier : LICA 2

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

Identified uses

Lubricating grease

Supplier's details :

TotalEnergies Marketing (Thailand) Co., Ltd.
173/5, Asia Centre Building
12th Floor
South Sathorn Road, Thungmahamek
Sathorn, Bangkok 10120
Tel: +66 2 1636364 71
Fax: +66 2 16363 72
ms.ap-sds@totalenergies.com

TotalEnergies Marketing Asia-Pacific Middle East Pte. Ltd.
182 Cecil Street
#27-01 Frasers Tower
Singapore 069547
Tel: +65 6879 2200
ms.ap-sds@totalenergies.com

Emergency telephone number (with hours of operation) :

Asia-Pacific: +65 3158 1074
Thailand: 001 800 120 666 751 (toll-free in country)

Section 2. Hazards identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 3

GHS label elements

Signal word : Warning

Hazard statements : Causes mild skin irritation.

Precautionary statements

Prevention : Not applicable.

Response : If skin irritation occurs: Get medical advice or attention.

Storage : Not applicable.

Disposal : Not applicable.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % (w/w) | CAS number |
|-------------------------------------|---------|------------|
| calcium carbonate | <10 | 471-34-1 |
| calcium(2+) 12-hydroxyoctadecanoate | ≤3 | 3159-62-4 |

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** : No known significant effects or critical hazards.
- 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, CO ₂ , water spray (fog) or foam. |
| Unsuitable extinguishing media | : Do not use water jet. |

| | |
|---|---|
| Specific hazards arising from the chemical | : In a fire or if heated, a pressure increase will occur and the container may burst. |
|---|---|

| | |
|---|---|
| Hazardous thermal decomposition products | : Carbon dioxide. carbon monoxide Hydrogen sulfide Mercaptans phosphorus oxides sulfur oxides Zinc oxides |
|---|---|

| | |
|---|---|
| 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

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** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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. Avoid breathing vapor or mist. 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. 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

None.

- 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** : 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.

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.

Appearance

- Physical state** : Liquid.
- Color** : Brown.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.



Lower and upper explosive (flammable) limits : Not available.
Vapor pressure : Not available.
Vapor density : Not available.
Relative density : 0.9 [ASTM D 4052]
Density : 0.9 g/cm³ [15°C] [ASTM D 4052]
Solubility(ies) :

| Media | Result |
|------------|-------------|
| cold water | Not soluble |
| hot water | Not soluble |

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Kinematic (40°C (104°F)): Not applicable.
Flow time (ISO 2431) : Not available.
Particle characteristics
Median particle size : Not applicable.

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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Carbon dioxide.
carbon monoxide
Hydrogen sulfide
Mercaptans
phosphorus oxides
sulfur oxides
Zinc oxides

**Section 11. Toxicological information****Information on toxicological effects****Acute toxicity**

| Product/substance | Result | Species | Dose | Exposure | Test |
|--|-------------|-----------------------|-------------|----------|----------|
| calcium carbonate | LD50 Dermal | Rat | >2000 mg/kg | - | OECD 402 |
| | LD50 Oral | Rat | 6450 mg/kg | - | - |
| calcium(2+) 12-hydroxyoctadecanoate | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - | OECD 402 |
| | LD50 Oral | Rat - Female | >2000 mg/kg | - | OECD 420 |

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

Irritation/Corrosion

| Product/substance | Result | Species | Score | Exposure | Test |
|--|--------------------------|---------|-------|-----------------|----------|
| calcium carbonate | Eyes - Severe irritant | Rabbit | - | 24 hours 750 ug | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| calcium(2+) 12-hydroxyoctadecanoate | Eyes - Cornea opacity | Rabbit | 0 | - | OECD 405 |

Skin : Based on available data, the classification criteria are met.

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

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

Sensitization

| Product/substance | Route of exposure | Species | Result |
|--|-------------------|---------|-----------------|
| calcium(2+) 12-hydroxyoctadecanoate | skin | Mouse | Not sensitizing |

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

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

Mutagenicity

| Product/substance | Test | Experiment | Result |
|--|----------|--|----------|
| calcium(2+) 12-hydroxyoctadecanoate | 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 |
|--|-------------------|-----------|-------------------|--------------------|--------|----------|
| 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.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : 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 |
|--|--------------------------|-----------------------|------------|----------|
| calcium(2+) 12-hydroxyoctadecanoate | Sub-chronic NOAEL Dermal | Rat - Male, Female | 1000 mg/kg | - |

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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) |
|-------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| LICA 2 | 210814.6 | N/A | N/A | N/A | N/A |
| calcium carbonate | 6450 | N/A | N/A | N/A | N/A |
| calcium(2+) 12-hydroxyoctadecanoate | 2500 | N/A | N/A | N/A | N/A |

Section 12. Ecological information

Toxicity

| Product/substance | Result | Species | Exposure | Test |
|-------------------------------------|------------------------|---------------------------------|----------|----------|
| calcium carbonate | Acute EC10 >14 mg/l | - | 72 hours | OECD 201 |
| | Acute EC50 >14 mg/l | Algae - Desmodesmus subspicatus | 72 hours | OECD 201 |
| | Acute LC50 >56000 ppm | Fish - Gambusia affinis - Adult | 96 hours | - |
| | Chronic NOEC 16.5 mg/l | Fish - Rhamdia quelen | 30 days | - |
| calcium(2+) 12-hydroxyoctadecanoate | Fresh water | - | 72 hours | - |
| | Acute EC50 161 mg/l | - | 72 hours | - |
| | Acute EC50 >100 mg/l | Daphnia - Daphnia magna | 48 hours | - |

Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| calcium carbonate | - | - | Readily |

Bioaccumulative potential

Not available.

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. |

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

Harmful Chemicals List : Listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | |
|--|---|
| Australia inventory (AIIC) | : All components are listed or exempted. |
| Canada inventory (DSL/NDL) | : 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) | : Not determined. |
| Taiwan Chemical Substances Inventory (TCSI) | : Not determined. |
| Thailand inventory | : Not determined. |
| Turkey inventory | : Not determined. |
| United States inventory (TSCA 8b) | : All components are listed or exempted. |
| Vietnam inventory | : Not determined. |

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

Section 16. Other informationHistory

| | |
|----------------------------------|--|
| Date of revision | : 2022/08/16 |
| Date of previous revision | : No previous validation |
| Version | : 1 |
| Key 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 |

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader



TotalEnergies

LICA 2

SDS # : 086276

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.