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

- Product identifier
- Trade name: KORTACID 1811
- Description: Oleic Acid 78% min
- CAS Number: 112-80-1
- EC number: 204-007-1
- REACH Reg. No: Exempted Under Annex V
- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.

2 Hazards identification

- Classification of the substance or mixture
  The substance is not classified according to the Globally Harmonised System (GHS).

- Label elements
  - GHS label elements: Void
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements: Void
  - Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterisation: Substances
- CAS No. Description
  - 112-80-1 Oleic acid
- Identification number(s)
- EC number: 204-007-1

4 First aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

Information for doctor:
Most important symptoms and effects, both acute and delayed: No further relevant information available.
Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
Under certain fire conditions, traces of other toxic gases cannot be excluded.

Advice for firefighters
Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.

Environmental precautions:
Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling
Keep away from heat and direct sunlight.
Store in cool, dry place in tightly closed receptacles.
Open and handle receptacle with care.

Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:
Keep container tightly sealed.
Protect from heat and direct sunlight.
Specific end use(s) No further relevant information available.
Safety data sheet
According to GHS 3rd Revision, Annex IV

Trade name: KORTACID 1811

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.

<table>
<thead>
<tr>
<th></th>
<th>Dermal</th>
<th>Inhale</th>
<th>DNL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dermal</td>
<td>DNL 10 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhale</td>
<td>DNL 17.632 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: The lists valid during the making were used as basis.

- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.
- Respiratory protection: Not required.
- Protection of hands:
  - Protective gloves
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
    - Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.
  - Material of gloves
    - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - Nitrile rubber, NBR
    - Chloroprene rubber, CR
  - Penetration time of glove material
    - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection:
  - Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Oily
    - Colour: Light yellow
    - Odour: Faint fatty smell
    - Odour threshold: Not determined.
  - pH-value: Not determined.
  - Change in condition
    - Melting point/freezing point: 8-16.3 °C
46. Initial boiling point and boiling range: 286 °C
- Flash point: 189 °C (PMCC)
- Flammability (solid, gas): Not applicable.
- Ignition temperature: >250 °C
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Not determined.
- Explosive properties: Product does not present an explosion hazard.
- Explosion limits: Not determined.
- Vapour pressure at 25 °C: 0.0000728 hPa
- Density at 20 °C: 0.89 g/cm³
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with water: Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water: Not determined.

10 Stability and reactivity
- Reactivity: No further relevant information available.
- Chemical stability: Stable at environment temperature
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: Reacts with oxidizing agents
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products:
  Irritant gases/vapours
  Carbon monoxide and carbon dioxide

11 Toxicological information
- Information on toxicological effects
  - Acute toxicity
    Oral LD₅₀ 19,243 mg/kg bw/day (IUCLID)
    Dermal LD₅₀ >3,000 mg/kg bw/day (IUCLID)
  - LD/LC₅₀ values relevant for classification:
    Oral LD₅₀ 74,000 mg/kg (rat)
- Primary irritant effect:
  - Skin corrosion/irritation: No irritant effect.
  - Serious eye damage/irritation: No irritating effect.
  - Respiratory or skin sensitisation: No sensitising effects known.
46.0
· Additional toxicological information:
The substance is not subject to classification according to the latest version of the EU lists.
· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity
  Oral | NOAEL (teratogenicity) | 1,000 mg/kg bw/d
  | NOAEL (fertility) | 1,000 mg/kg bw/d
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure
  Oral | NOAEL (subchronic) | 1,000 mg/kg bw/day (rat)

12 Ecological information
· Toxicity
  · Aquatic toxicity:
    | LC50(14DAY) | 0.004 mg/L (fish) (QSAR)
    | LC/EC/IC50 | >100 m/L (Gesamp)
  · Persistence and degradability Readily biodegradable
  · Behaviour in environmental systems:
  · Bioaccumulative potential Does not accumulate in organisms
  · Mobility in soil No further relevant information available.
  · Additional ecological information:
    · General notes:
      Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
      Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    · Results of PBT and vPvB assessment
      · PBT: Not applicable.
      · vPvB: Not applicable.
    · Other adverse effects No further relevant information available.

13 Disposal considerations
· Waste treatment methods
  · Recommendation Must be specially treated adhering to official regulations.
· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information
· UN-Number
  · ADR, ADN, IMDG, IATA not regulated
· UN proper shipping name
  · ADR, ADN, IMDG, IATA not regulated
· Transport hazard class(es)
  · ADR, ADN, IMDG, IATA
  · Class not regulated
· Packing group
  · ADR, IMDG, IATA not regulated
Safety data sheet
According to GHS 3rd Revision, Annex IV

Trade name: KORTACID 1811

(Contd. of page 5)

- Environmental hazards: Not applicable.
- Special precautions for user Not applicable.

- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Product name: Fatty Acids, C18+ (Oleic Acid)
  - Pollution category: Y
  - Ship type: 2
- UN "Model Regulation": not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - GHS label elements Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- National regulations:
- Other regulations, limitations and prohibitive regulations
  - Positive Country Substance Listing
  - USA (TSCA), Canada (DSL), Europe (EINECS), Japan (ENCS), Australia (AICS), Korea (ECL), China (IECSC), Philippines (PICCS), New Zealand (NZIOC), Taiwan (CSNN)
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Product safety department.
- Contact: poc@pacificoleo.com
- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - DNEL: Derived No-Effect Level (REACH)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
- * Data compared to the previous version altered.
  - Revision 3 (23.04.2018)
  - Update Section 3 and Section 1