1. Product and company identification

Product name: Aral Aralub LFZ 1
SDS #: 456145
Code: 456145-DE08
Product use: Grease for industrial applications
For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier: Castrol Brasil Ltda.
Avenida Itaóca 2400 - Inhaúma
21061-020 - Rio de Janeiro - RJ - Brasil
Telefone: 55 21 25987222

EMERGENCY SPILL INFORMATION:
+55 0 8000 265544 (24 h)

2. Hazards identification

Physical state: Grease
Color: Black.
Emergency overview: CAUTION!
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry: Dermal contact. Eye contact. Inhalation.

Potential health effects:
- Eyes: May cause eye irritation.
- Skin: May cause skin irritation.
- Inhalation: May cause respiratory tract irritation.
- Ingestion: Ingestion may cause gastrointestinal irritation and diarrhea.

See toxicological information (Section 11)

3. Composition/information on ingredients


<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base oil - highly refined</td>
<td>Varies</td>
<td>70 - 75</td>
</tr>
</tbody>
</table>

Occupational Exposure Limit(s), if available, are listed in section 8.

4. First aid measures

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Fire/explosion hazards</th>
<th>In a fire or if heated, a pressure increase will occur and the container may burst.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing media</td>
<td></td>
</tr>
<tr>
<td>Suitable</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td>Not suitable</td>
<td>Do not use water jet.</td>
</tr>
<tr>
<td>Fire-fighting procedures</td>
<td>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.</td>
</tr>
<tr>
<td>Hazardous combustion products</td>
<td>Combustion products may include the following: carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)</td>
</tr>
<tr>
<td>Protective clothing (fire)</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

6. Accidental release measures

| Personal precautions          | No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). |
| Environmental precautions     | Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Methods for cleaning up       |                                                                                  |
| 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. |
| 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. |

7. Handling and storage

| Handling                      | Put on appropriate personal protective equipment (see Section 8). Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. |
| Storage                      | Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). 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. |

| Not suitable                  | Prolonged exposure to elevated temperature |
8. Exposure controls/personal protection

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Occupational exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base oil - highly refined</td>
<td>ACGIH TLV (United States). TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction</td>
</tr>
</tbody>
</table>

**Control Measures**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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.

**Personal protection**

**Eyes**

Avoid contact with eyes. Safety glasses with side shields or chemical goggles.

**Skin and body**

Avoid contact with skin and clothing. Wear suitable protective clothing.

**Respiratory**

Use adequate ventilation. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

**Hands**

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

9. Physical and chemical properties

**Physical state**

Grease

**Color**

Black.

**Odor**

Oily

**Density**

<1000 kg/m³ (<1 g/cm³) at 20°C

**Solubility**

insoluble in water.

10. Stability and reactivity

**Stability and reactivity**

The product is stable.

**Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**

Not available.

**Incompatibility with various substances**

Reactive or incompatible with the following materials: oxidizing materials.

**Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Hazardous polymerization**

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

**Potential chronic health effects**

**Carcinogenicity**

No known significant effects or critical hazards.
12. Ecological information

Ecotoxicity
No testing has been performed by the manufacturer.

Persistence/degradability
No testing has been performed by the manufacturer.

Mobility
Spillages are unlikely to penetrate the soil.

Bioaccumulative potential
No testing has been performed by the manufacturer.

Other ecological information
This product is unlikely to disperse in water.

13. Disposal considerations

Waste information
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.

NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal.

14. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO, Mexico)

15. Regulatory information

Other regulations

<table>
<thead>
<tr>
<th>Country Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada inventory</td>
<td>Not determined.</td>
</tr>
<tr>
<td>United States inventory (TSCA 8b)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>REACH Status</td>
<td>The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.</td>
</tr>
<tr>
<td>Australia inventory (AICS)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>China inventory (IECSC)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Japan inventory (ENCS)</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Korea inventory (KECI)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Philippines inventory (PICCS)</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

16. Other information

Label requirements
CAUTION !
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

History

Date of issue
07/02/2013.

Date of previous issue
No previous validation.
Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below.

The data and advice given apply when the product is sold and applied for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user’s obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.