# GRASIM INDUSTRIES LIMITED (CHEMICAL DIVISION)

## MATERIAL SAFETY DATA SHEET

Chlorinated Paraffin

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### 1. IDENTIFICATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Marks and Synonyms (if any)</td>
<td>C14-17 chlorinated paraffin (containing &lt; 1% C10-13) (chlorination: 40-63%), ARYAFIN-B1/B2/B3</td>
</tr>
<tr>
<td>Chemical Names and Synonyms</td>
<td>Alkanes, C14-17, chloro Chlorinated Paraffin Wax</td>
</tr>
<tr>
<td>Physical Form</td>
<td>Amber to light pale yellow, almost clear/viscous liquid having slight characteristic odour</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>([C_nH_{(2n+2-m)}Cl_m] ) where n=14 to 17, m=6</td>
</tr>
<tr>
<td>Manufacturer Name &amp; Address</td>
<td>Grasim Industries Ltd. (Chemical Division) Birlagram, Nagda, Dist. Ujjain (MP) 456331, INDIA</td>
</tr>
<tr>
<td></td>
<td>Telephone: 91-7366-245848/248040</td>
</tr>
<tr>
<td>Responsible Person</td>
<td>Safety Officer; Grasim Industries Ltd. (Chemical Division) Birlagram, Nagda, Dist. Ujjain</td>
</tr>
</tbody>
</table>

### 2. INFORMATION OF MAJOR INGREDIENTS

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>C14-17 chlorinated Paraffin</td>
</tr>
<tr>
<td>CAS No</td>
<td>85535-85-9</td>
</tr>
<tr>
<td>Formula</td>
<td>([C_nH_{(2n+2-m)}Cl_m] ) where n=14 to 17, m=6</td>
</tr>
</tbody>
</table>
3. **HAZARD IDENTIFICATION**

- **Main Risk**
  - None

- **Contact with skin**
  - No irritation, on contact for small duration

- **Contact with eyes**
  - Causes irritation

- **Safety Phrases**
  - Keep out of reach of children. In case of contact with skin, wash immediately with plenty of water.

4. **PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance and Odour**
  - Clear, Pale yellow mobile – viscous liquid, low

- **pH (10% aqueous solution)**
  - 6.0 – 7.0

- **Chlorine Content**
  - About 51% m/m

- **Specific gravity at 25°C**
  - 1.10 – 1.45 @ 25°C

- **Boiling Point**
  - >200, Decomposes below boiling point

- **Freezing Point**
  - Data not available

- **Flash Point (deg. C)**
  - None

- **Auto ignition (deg. C)**
  - None

- **Flammable Limit**
  - UEL: Not Applicable LEL: Not Applicable

- **Vapour Pressure (mm Hg)**
  - Not Applicable

- **Decomposition Temperature**
  - Above 160°C

- **Solubility in Water**
  - Insoluble

- **Solubility in Organic Solvents**
  - Soluble in most aromatic hydrocarbons, chlorinated solvents, esters and ketones

- **Pour Point (Deg C)**
  - -40 to +27

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**STABILITY AND REACTIVITY**

- **Stability**
  - As supplied, It is stable at normal temperatures and pressures.
  - Non flammable under fire conditions

- **Conditions to avoid**
  - Strong oxidizing agents, heat and hot surfaces.

- **Material to avoid**
  - Alkali metals and alkaline earth metals which have a strong affinity for chlorine. Can react with iron, zinc and aluminum at high temperatures leading to decomposition. Material tends to soften or swell most rubbers.
Reactivity

Air No Reaction
Water No Reaction
Acids Contact with mineral acids can lead to degradation
Alkalis Reacts with alkaline or alkaline earth metals, which have a strong affinity for chlorine.

Hazardous Decomposition Products Prolonged heating at temperatures in excess of 70°C or heating above 200°C for short periods will result in decomposition and liberation of hydrogen chloride.

6. TOXICITY DATA

Short term effects when:

In contact with skin Repeated exposure may cause skin dryness and cracking. Unlikely to be hazardous by skin absorption.
In contact with eyes By analogy with a similar substance this material is likely to cause slight eye irritation.
Inhaled Not volatile at room temperature. Inhalation is not a likely route of exposure at normally encountered temperatures.
Ingestion Ingestion of large amounts of chlorinated paraffin’s may cause intestinal obstruction. Repeated exposure to high levels may result in liver or kidney damage.

Acute Oral Toxicity (Rats) \( \text{LD}_{50} > 4000 \text{ mg/kg} \)

Chronic Toxicity Not Available
Carcinogenic Toxicity No data is available on the carcinogenicity of chlorinated paraffins to humans
Mutagenic Toxicity Studies for mutagenicity were negative.
Reproductive Toxicity No information is available.
7. **FIRST AID MEASURES**

Skin Contact  Remove contaminated clothing and wash affected area with sufficient quantity of soap and water for 15-20 minutes.

Eye Contact  Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain medical attention.

Inhalation  Remove patient from exposure, keep warm and at rest.

Ingestion  Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

Further Medical Advice  If in doubt, seek medical attention.

8. **FIRE AND EXPLOSION HAZARD DATA**

Fire Extinguishing Data  It is nonflammable. Use extinguishing media suitable for surrounding fire.

Heating will emit fumes. Water spray, foam, carbon dioxide or dry powder may be used. Keep containers cool with copious amounts of water.

Would any material saturated with this product be subject to spontaneous combustion?  No

Fire Fighting Protective Equipment  Wear full protective clothing

Unusual Fire and Explosive Hazards  During a fire in which this material is involved, hydrogen chloride (HCl) may be liberated.

9. **PERSONAL PROTECTION**

General Precautions  Eye and skin protection should be used when Handling C14-17 chlorinated paraffin

Ventilation Requirements  None

Respiratory Protection  Not normally required.
Protective Clothing
- Protective overall
- Polythene gloves
- Hard hat
- Acid resistant boots

Eye Protection
- Goggles or full-face mask.

10. HANDLING AND STORAGE

Handling
- Avoid contact with eyes.
- Avoid prolonged skin contact.
- Provide adequate ventilation where operational procedures demand it.
- Do not allow to enter drains, sewers or watercourses.

Storage
- Keep only in original container at temperatures not exceeding 40°C.
- Keep containers dry.
- Keep away from direct sunlight.
- Storage vessels should be made of lined mild steel.

11. SPILLAGE/ACCIDENTAL RELEASE

Small Spillage
- Absorb or contain liquid with sand or clay for disposal. Put leaking containers in a labeled drum. Wash spill area with large volumes of water.

Large Spillage
- Transfer or pump to a labeled, sealable container for product recovery or safe disposal. Wash spills area with large volumes of water and allow to drain it into waste treatment system. Collect liquid either by pumping into an emergency. Do not allow entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

Personal Precautions
- Wear full protective clothing.

Environmental Precautions
- Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers and inform relevant authorities.

12. WASTE DISPOSAL
Waste Disposal

This material and/or its container must be disposed of as hazardous waste. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Disposal should be in accordance with local, state or national legislation.

13. ENVIRONMENTAL INFORMATION

Bio-Accumulation

No relevant data is available.

Biodegradability

The product is partially removed in biological treatment processes. Biodegradation appears to occur under both aerobic and anaerobic conditions, but the data is poor.

Toxicity

A representative C14-17 chlorinated paraffin has been shown to be toxic to daphnia in laboratory studies. It showed a low level of toxicity to another aquatic invertebrate species (gammarus) and to fish and algae. Toxicity to aquatic species: Daphnia magna 48 hr EC50 = 0.006 mg/l

Mobility

If released into water the product will sink. The product is in volatile and insoluble and will accumulate on the ground.

14. REGULATORY INFORMATION

Danger Symbol

NA

Risk Phrases

R40/R20/R22: Harmful: possible risk of irreversible effects through inhalation and if swallowed.
R36: Irritating to eyes
R50/53: Very toxic to aquatic organisms, may cause long term adverse effects
R64: May cause harm to breast feed babies
R66: Repeated exposure may cause skin dryness or cracking

Safety Phrases

S1/2: Keep locked up and out of the reach of children.
S24/25: Avoid contact with skin and eyes.
S23: Do not breathe gas/flumes/vapour/spray.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately and show the label where possible)
S60: Material and its container must be disposed of as hazardous waste
S61: Avoid release to the environment

15. TRANSPORT INFORMATION

UN No.

3082

EC No:

287-477-0

PACKAGING GROUP

III
16. OTHER INFORMATION

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

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