MATERIAL SAFETY DATA SHEET (MSDS) - EXXSOL D60

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: EXXSOL D60
Product Description: Dearomatised Hydrocarbons
Product Code: Intended Use: Solvent

COMPANY IDENTIFICATION

Supplier: Pon Pure Chemicals Group
CHENNAI, TAMILNADU, INDIA

24 Hour Health Emergency (91) 8939878447
(91) 9444038694

Transportation Emergency Phone (91) 8939768680

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Place</th>
<th>EMERGENCY TELEPHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pon Pure Chemicals Group</td>
<td>India</td>
<td>Day Emergency – 044-26161803-26161809</td>
</tr>
</tbody>
</table>

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

This material is regulated as a complex substance.

Hazardous Substance(s) or Complex Substance(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Concentration*</th>
<th>Symbols/Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>100%</td>
<td>Xn; R65, R66</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 3 - HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION: | Xn; R65 | R66 |
PHYSICAL / CHEMICAL HAZARDS
Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an incendiary electrical discharge.

HEALTH HAZARDS
Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. May be irritating to the eyes, nose, throat, and lungs.

Note: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 - FIRST AID MEASURES

INHALATION
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT
Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT
Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION
Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN
If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to
extinguish flames.

**Inappropriate Extinguishing Media:** Straight streams of water

**FIRE FIGHTING**

**Fire Fighting Instructions:** Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Unusual Fire Hazards:** Combustible. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

**Hazardous Combustion Products:** Smoke, Fume, Oxides of carbon, Incomplete combustion products

**FLAMMABILITY PROPERTIES**

- **Flash Point [Method]:** 63°C (145°F) [ ASTM D-93]
- **Flammable Limits (Approximate volume % in air):** LEL: 0.6 UEL: 7.0
- **Auto ignition Temperature:** >200°C (392°F)

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**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**PROTECTIVE MEASURES**

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

**SPILL MANAGEMENT**

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but
may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

**Water Spill:** Stop leak if you can do so without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

**ENVIRONMENTAL PRECAUTIONS**

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

<table>
<thead>
<tr>
<th>SECTION 7 - HANDLING AND STORAGE</th>
</tr>
</thead>
</table>

**HANDLING**

Avoid contact with skin. Use proper bonding and/or earthing procedures. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source).

**Loading/Unloading Temperature:** [Ambient]

**Transport Temperature:** [Ambient]

**Static Accumulator:** This material is a static accumulator.

**STORAGE**

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Drums must be earthed and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

**Storage Temperature:** [Ambient]

**Storage Pressure:** [Ambient]

**Suitable Containers/Packing:** Tank Cars; Tank Trucks; Barges; Drums

**Suitable Materials and Coatings:** Carbon steel; Stainless steel; Polyethylene; Polypropylene; Polyester; Teflon

**Unsuitable Materials and Coatings:** Natural rubber; Butyl rubber; Polystyrene; Ethylene-propylene-diene monomer (EPDM)
**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE LIMIT VALUES**

Exposure limits/standards (Note: Exposure limits are not additive)

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>Form</th>
<th>Limit/Standard</th>
<th>Note</th>
<th>Source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydro treated heavy</td>
<td>Vapour.</td>
<td>RCP TWA</td>
<td>1200 mg/m³, 184 ppm</td>
<td>Total Hydrocarbons</td>
<td>Exxon Mobil</td>
</tr>
</tbody>
</table>

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

**ENGINEERING CONTROLS**

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

**PERSONAL PROTECTION**

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

- Half-face filter respirator Type A filter material.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly affect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:
If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves. Nitrile

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

**ENVIRONMENTAL CONTROLS**

See Sections 6, 7, 12, 13.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

**GENERAL INFORMATION**

- **Physical State:** Liquid
- **Form:** clear
- **Colour:** Colourless
- **Odour:** mild petroleum/solvent
- **Odour Threshold:** N/D

**IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION**

- **Relative Density (at 15 °C):** 0.792
- **Density (at 15 °C):** 792 kg/m³ (6.61 lbs/gal, 0.79 kg/dm³)
- **Flash Point [Method]:** 63°C (145°F) [ ASTM D-93]
- **Flammable Limits (Approximate volume % in air):** LEL: 0.6 UEL: 7.0
- **Autoignition Temperature:** >200°C (392°F)
- **Boiling Point / Range:** 187°C (369°F) - 216°C (421°F)
- **Vapour Density (Air = 1):** > 1 at 101 kPa
- **Vapour Pressure:** 0.05 kPa (0.38 mm Hg) at 20°C | 0.2 kPa (1.5 mm Hg) at 38°C | 0.4 kPa (3 mm Hg) at 50°C
- **Evaporation Rate (N-Butyl Acetate = 1):** 0.03
pH : N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water : Negligible
Viscosity : 1.32 cSt (1.32 mm²/sec) at 40°C | 1.64 cSt (1.64 mm²/sec) at 25°C
Oxidising properties : See Sections 3, 15, 16.

OTHER INFORMATION
Freezing Point : <-20°C (-4°F)
Melting Point : N/A
Molecular Weight : 158 [Calculated]
Hygroscopic : No
Coefficient of Thermal Expansion: 0.00095 V/V/°C

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.
CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.
MATERIALS TO AVOID: Strong oxidisers
HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11- TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Conclusion / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INHALATION</strong></td>
<td></td>
</tr>
<tr>
<td>Toxicity: Data available.</td>
<td>Minimally Toxic. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td>Irritation: Data available.</td>
<td>Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.</td>
</tr>
</tbody>
</table>
### INGESTION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity: LD50 &gt; 15000 mg/kg</td>
<td>Minimally Toxic. Based on test data for the material.</td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td></td>
</tr>
<tr>
<td>Toxicity: LD50 &gt; 3160 mg/kg</td>
<td>Minimally Toxic. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td>Irritation: Data available.</td>
<td>Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td><strong>Eye</strong></td>
<td></td>
</tr>
<tr>
<td>Irritation: Data available.</td>
<td>May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.</td>
</tr>
</tbody>
</table>

### CHRONIC/OTHER EFFECTS

**For the product itself:**

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Additional information is available by request.

**IARC Classification:**

The Following Ingredients are Cited on the Lists Below: None.

---REGULATORY LISTS SEARCHED---

1 = IARC 1  
2 = IARC 2A  
3 = IARC 2B

### SECTION 12 - ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

**ECOTOXICITY**

Material -- Not expected to be harmful to aquatic organisms.
Material -- Not expected to demonstrate chronic toxicity to aquatic organisms

PERSISTENCE AND DEGRADABILITY

Biodegradation:  
Material -- Expected to be readily biodegradable.

Hydrolysis:  
Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:  
Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:  
Material -- Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION

VOC:  Yes

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied.  Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Empty Container Warning Empty Container Warning (where applicable):  Empty containers may contain residue and can be dangerous.  Do not attempt to refill or clean containers without proper instructions.  Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed.  Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.  DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14- TRANSPORT INFORMATION

LAND:  Not Regulated for Land Transport
SEA (IMDG):  Not Regulated for Sea Transport according to IMDG-Code
AIR (IATA):  Not Regulated for Air Transport
SECTION 15 - REGULATORY INFORMATION

Material is hazardous as defined by the EU Dangerous Substances/Preparations Directives.

EU CLASSIFICATION: Harmful. The classification of this product is based all or in part on test data.

EU LABELING:
   Symbol: Xn

   Harmful.

Nature of Special Risk: R65; Harmful: may cause lung damage if swallowed. R66; Repeated exposure may cause skin dryness or cracking.

Safety Advice: S23; Do not breathe gas/fumes/vapour/spray S24; Avoid contact with skin. S62; If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Complies with the following national/regional chemical inventory requirements: AICS, IECSC, DSL, ENCS, KECI, PICCS, TSCA

SECTION 16 - OTHER INFORMATION

Disclaimer:
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