SECTION I - PRODUCT IDENTIFICATION & USE

Product Name: **ACF-50® Bulk Liquid**

Application: ACF-50® is an industrial product designed as a corrosion preventative and treatment for aircraft structures and systems, on non-ferrous and ferrous metals, to protect electronics, and as a lubricant in mechanized equipment.

SECTION II - COMPOSITION

**Chemical Composition:** Proprietary combination of refined petro chemicals. ACF-50 has been tested as a complete complex mixture and has been found to be Non-Toxic according to EPA/ OECD guidelines. Inhalation testing was not performed and a suggested exposure limit is listed below:

SECTION III - HAZARDOUS COMPONENTS

<table>
<thead>
<tr>
<th>Chemical Names</th>
<th>CAS #</th>
<th>OSHA / PEL</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACF-50 (oil mist)</td>
<td>NA</td>
<td>5 mg/m³ (TWA)</td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION IV - PHYSICAL/CHEMICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Physical/Chemical Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point:</td>
<td>&gt;212 F</td>
</tr>
<tr>
<td>Vapor Pressure (mmHg):</td>
<td>&lt; 8 mm Hg</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Heavier than air (Air)</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Emulsifiable</td>
</tr>
<tr>
<td>Appearance:</td>
<td>Purple Liquid</td>
</tr>
<tr>
<td>Odor:</td>
<td>Sweet</td>
</tr>
<tr>
<td>Specific Gravity (H2O=1):</td>
<td>.88</td>
</tr>
<tr>
<td>Melting Point (Deg. F):</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Slower (Relative to Butyl Acetate)</td>
</tr>
</tbody>
</table>

SECTION V - FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>Fire and Explosion Hazard Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point:</td>
<td>165 F</td>
</tr>
<tr>
<td>Method:</td>
<td>PMCC</td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>Solvent component only: LEL 1.0 UEL: 6.0</td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>CO², Dry Chemical, Foam, Water spray</td>
</tr>
<tr>
<td>Fire Fighting Procedures:</td>
<td>Use full protective equipment and self-contained breathing apparatus. Use water spray to cool fire exposed containers and as a protective screen. Do not point solid water stream directly into burning liquid to avoid spreading fire.</td>
</tr>
<tr>
<td>Fire Explosion Hazards:</td>
<td>Treat as combustible liquid. Do not flame cut, drill or weld empty containers.</td>
</tr>
<tr>
<td>Fire Hazard Identification:</td>
<td>NFPA STD.704</td>
</tr>
<tr>
<td></td>
<td>Health -O Flammability-2-Reactivity-0</td>
</tr>
<tr>
<td></td>
<td>NFPA STD. 321: Combustible Liquid, Class III 3A</td>
</tr>
</tbody>
</table>

SECTION VI - REACTIVITY DATA

<table>
<thead>
<tr>
<th>Reactivity Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability:</td>
<td>Stable</td>
</tr>
<tr>
<td>Incompatibility:</td>
<td>Oxidizing materials (Liquid or compressed oxygen, peroxides, chlorine)</td>
</tr>
<tr>
<td>Hazardous Decomposition:</td>
<td>Thermal conditions produce normal products of combustion including: Carbon Oxides (CO- CO²) Nitrogen oxides (N0²-NO) Sulfur oxides (S0²-SO3).</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>
## SECTION VII - TOXICOLOGICAL PROPERTIES

ACF-50 Bulk Liquid has been tested (oral, eye, dermal) as a complete mixture and is considered “Non-Toxic” according to EPA/OECD and FHSA guidelines.

### Primary Routes of entry:

<table>
<thead>
<tr>
<th>Route</th>
<th>Acute LD50/AC50</th>
<th>Acute LC50/AC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Oral</td>
<td>LD50 &gt; 5000 mg/kg</td>
<td>LC50 &gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Acute Dermal</td>
<td>LD50 &gt; 5000 mg/kg</td>
<td>LC50 &gt; 5000 ppm -Rat-Aliphatic hydrocarbon (est.)</td>
</tr>
<tr>
<td>Acute Vapor</td>
<td></td>
<td>LC50 &gt; 5000 ppm -Rat-Petroleum distillate</td>
</tr>
</tbody>
</table>

### Carcinogenicity:
Non-carcinogenic, according to NTP, IARC, OSHA or ACGIH.

### Sensitization:
Non-sensitizer

### Mutagenic effects:
No

### Tetragenic:
No

### Reproductive:
No

### Developmental:
No

### EFFECTS OF OVEREXPOSURE:

- **Inhalation:** May cause headache, nausea, or dizziness.
- **Skin and Eyes:** May cause drying, chapping of skin, may cause redness of eyes
- **Ingestion:** May be harmful or fatal if swallowed.

## SECTION VIII - EMERGENCY AND FIRST AID PROCEDURES

<table>
<thead>
<tr>
<th>Route</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Remove excess by wiping, followed by washing with soap and water.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Copious warm water flush-15 minutes, Physician assessment if eyes inflamed.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Evacuate to fresh air. Apply CPR if required. If resuscitation is required, physician’s assessment is mandatory.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>DO NOT INDUCE VOMITING. If vomiting - take care to prevent aspiration. Give 1/2 pint milk to drink. Mandatory physician assessment: Note to Physician: If amount ingested is &gt; 5000mg/Kg Consult standard literature for Hydrocarbon poison.</td>
</tr>
</tbody>
</table>

## SECTION IX - PREVENTIVE MEASURES

### Steps to be taken if Spilled:
Eliminate sources of ignition - Stop or reduce flow with barricades - Absorb small spills using dry clay, commercial sorbents. Collect residue into suitable container for disposal. Material may be drained into floor drains equipped with Oil Interceptors.

### Waste Disposal Method:
Dispose in approved landfill site or incinerate at licensed waste reclamer facility. Liquid waste to be removed by licensed reclamer, under Used Oil Classification. Follow all Local, Provincial, State and Federal Requirements. Materials not listed as a hazardous waste under RCRA.

### Ventilation:
Provide sufficient General or Mechanical ventilation to maintain exposure below flammable limits.

### Respiratory Protection:
None normally needed - Unless atomizing in enclosed space, then use approved NIOSH organic, mist/vapor respirator.

### Protective Gloves:
None normally needed.

### Eye Protection:
None normally required, unless operator is using high-pressure spray equipment or splashing is likely.

### Other Protective Clothing:
None normally needed.

### Work/Hygienic Practices:
Wash hands and face with soap and water after use. Launder soiled clothing.

## SECTION X - REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Federal Regulations</td>
<td>None regulated commodity</td>
</tr>
<tr>
<td>TSCA Inventory</td>
<td>All components Listed</td>
</tr>
<tr>
<td>SARA Extreme Hazard</td>
<td>NO</td>
</tr>
<tr>
<td>CERCLA</td>
<td>NO</td>
</tr>
<tr>
<td>SARA Toxic Chemical</td>
<td>NO</td>
</tr>
<tr>
<td>TITLE III Hazard Classification</td>
<td><strong>Section 311, 312:</strong> Fire: No Chronic: No Pressure: No</td>
</tr>
<tr>
<td>Reactivity</td>
<td>No Acute: No</td>
</tr>
<tr>
<td>SECTION XI - TRANSPORTATION INFORMATION</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>TDG Road / Rail Classification: CONSUMER COMMODITY</td>
<td></td>
</tr>
<tr>
<td>DOT/IMO Label: NON-REGULATED</td>
<td></td>
</tr>
<tr>
<td>HAZARD CLASS: 0</td>
<td></td>
</tr>
<tr>
<td>AIR-IATA Class: NONE HAZARDOUS ----NONE REGULATED</td>
<td></td>
</tr>
</tbody>
</table>

Lear Chemical and its affiliates assume no responsibility for injury to anyone caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Lear Chemical Research Corp. and affiliates assume no responsibility for injury to anyone caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee and third persons assume the risk in their use of the material.

Date Issued: July 2005
Prepared by: Lear Chemical Research Corp.