LubriMist® Synthetic Oils (LSO) are high-performance lubricants designed over a 20 year period for use in oil mist systems. They are formulated from diester base stocks and advanced additive systems.

LSO provides significant performance advantages in oil mist systems as compared to other lubricants such as mineral and PAO based. Users recognize that lubricant properties targeted for performance in flooded lubrication may not be ideal for oil mist systems. LSO offers specific advantages for use in oil mist systems and for oil mist lubrication.

**CLEAN OPERATION**

LSO has natural detergency, solvency, and dispersency which can result in cleaner operation and lubrication. These properties are particularly beneficial when purging varnish, sludge, contaminant and wax build-up from systems that have operated with mineral based oils.

**OXIDATIVE STABILITY**

The base stocks used in LSO are uniform in composition. They do not contain varying molecular weight components, common in mineral-based oils (synthetics are petroleum oils too), which deteriorate more readily at elevated temperatures. LSO possesses superior oxidative stability and no volatile organic compounds (VOCs), making them more environmentally friendly.

**HIGH AUTO-IGNITION TEMPERATURE**

Because LSO contains no low molecular weight components, LSO has higher flash point and ignition temperatures than mineral-based oils. These are important safety factors.

**BROAD OPERATING TEMPERATURE RANGE**

LSO has a very low pour point and is wax free, making it ideal for low temperature applications. LSO can help eliminate cold weather reclassifier plugging issues, as encountered when mineral-based or other low polar oils are used in oil mist systems. In applications where operating temperatures are severe (>275° F), LSO resists the buildup of hard carbon deposits associated with the use of petroleum oil. Turbines and compressors are good applications for LSO.

**GRADES & AVAILABILITY**

LSO is available in a range of viscosities; LSO 32, 46, 68, 100 and 150. These all conform to the International Standards Organization (ISO) viscosity classification system. Grades 46, 68 and 100 are typically used in pure oil mist (dry sump) applications. Drums are currently the standard package with options for supply in bulk and totes on a world-wide distribution basis.
LSO is highly polar, favoring metal surfaces and supporting continuous coating with oil. This is crucial in oil mist systems where mist isn't directed to all metal surfaces in a bearing box.

LSO can be reconditioned and recycled using traditional filtering oil purification and air/gas stripping technologies. Recycling using ThermoJet® Oil Purifier makes its use economically justifiable.

Under Title III, Sections 311/312 of the Superfund Amendments and Reorganization Act, LSO products are classified as “not hazardous.” Proper personal hygiene is recommended. LSO fluids are removed from skin by waterless hand cleaners, followed by washing with soap and warm water. Additional information can be found in LubriMist® Synthetic Oil’s Material Safety Data Sheet.

**COMPATIBILITY**

LSO is compatible with conventional low solvency mineral oils and PAO synthetics. Neither separation nor undesirable reactions occur when mixed. It's compatible with common paints, plastics, and metals. Some polymers in o-ring seals will swell upon contact with LSO. Swelling is generally more beneficial than shrinkage experienced with PAO-based lubricants.

**WET ABILITY**

Since LSO is a highly polar lubricant, it has an affinity for metal surfaces, supporting continuous coating of surfaces with oil. This is especially important in oil mist systems where the mist is not directed onto all metal surfaces in a bearing box.

**LUBRIMIST SYNTHETIC LUBRICANTS**

**TYPICAL INSPECTION VALUES**

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>LSO 32</th>
<th>LSO 46</th>
<th>LSO 68</th>
<th>LSO 100</th>
<th>LSO 150</th>
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</thead>
<tbody>
<tr>
<td>Specific Gravity @ 60° F</td>
<td>0.92</td>
<td>0.94</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
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<tr>
<td>Density @ 60° F LB/US Gal</td>
<td>7.7</td>
<td>7.8</td>
<td>8.0</td>
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<tr>
<td>Flash Point, (PM) ° C</td>
<td>243</td>
<td>243</td>
<td>245</td>
<td>245</td>
<td>202</td>
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<tr>
<td>Flash Point, (PM) ° F</td>
<td>470</td>
<td>470</td>
<td>470</td>
<td>475</td>
<td>395</td>
</tr>
<tr>
<td>Kinematic Viscosity @ 40 ° C, cSt</td>
<td>30</td>
<td>44</td>
<td>68</td>
<td>95</td>
<td>132</td>
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<tr>
<td>Kinematic Viscosity @ 100 ° C, cSt</td>
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<td>6.4</td>
<td>75</td>
<td>10.1</td>
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<tr>
<td>Viscosity Index</td>
<td>121</td>
<td>92</td>
<td>77</td>
<td>92</td>
<td>86</td>
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<tr>
<td>Pour Point ° C ° F</td>
<td>-56</td>
<td>-40</td>
<td>-38</td>
<td>-40</td>
<td>-34</td>
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<tr>
<td>Autogenous Ignition Temperature ° C ° F</td>
<td>385</td>
<td>385</td>
<td>416</td>
<td>421</td>
<td>416</td>
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<tr>
<td>2 Years Continuous Storage Temperature ° C ° F</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
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<td>120</td>
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</tbody>
</table>

This information relates to the specific material designated and may not be valid for such material used in combination with other materials. It is the user’s responsibility to satisfy themselves as to the suitability and completeness of such information for his or her particular use.

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