**SERVO® PRODUCT DATA SHEET**

**SERVOSYSTEM 22 - 150**

**IndianOil**

**GRADES AVAILABLE - SERVOSYSTEM 22/32/46/57*/68/81*/100/150**

**DESCRIPTION**
Servosystem oils are anti-wear hydraulic and circulation oils specially formulated for efficient lubrication of a wide variety of industrial equipment. Servosystem oils are blended from highly refined base stocks and carefully selected antioxidant, anti-wear, anti-rust and anti-foam additives.

**APPLICATION**
Servosystem oils are recommended as fluid media for hydraulic systems and hydraulic pumps even under severe operating conditions in stationary and mobile equipment. These oils are also recommended for circulation, splash, bath and ring oiling systems of the bearings (both plain and anti-friction) and gears of industrial machinery that require a long life lubricant. These oils can be used for chain drives and compressor crankcase lubrication. They are not suitable for lubrication of turbines and silver or silver coated components in any equipment.

**PERFORMANCE BENEFITS**
Servosystem oils
- Provide good wear protection, thereby prolonging service life of moving parts
- Possess high film strength properties which help minimise friction and wear
- Provide rust-protection, to reduce the incidence of corrosion
- Have excellent resistance to oxidation thereby giving long service life
- Have reduced tendency to foam thereby minimise the chance of noisy operation and erratic actuator response

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>GRADE</th>
<th>22</th>
<th>32</th>
<th>46</th>
<th>57*</th>
<th>68</th>
<th>81*</th>
<th>100</th>
<th>150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity, cSt @ 40°C</td>
<td>20-24</td>
<td>29-33</td>
<td>43-48</td>
<td>55-60</td>
<td>64-72</td>
<td>78 - 85</td>
<td>95-105</td>
<td>145-155</td>
</tr>
<tr>
<td>Viscosity Index, Min</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Flash Point (COC), °C Min.</td>
<td>160</td>
<td>190</td>
<td>200</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>230</td>
</tr>
<tr>
<td>Pour Point, °C Max.</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
<td>(-) 6</td>
</tr>
</tbody>
</table>

* NON ISO VG

**HEALTH & SAFETY**
These oils are unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of industrial and personal hygiene are maintained.

For further information please contact our nearest office OR: Technical Services Dept., Indian Oil Corporation Ltd., G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai – 400 051
E-Mail: tservices@indianoil.co.in OR tech_services@indianoil.co.in
SERVO ® PRODUCT DATA SHEET
SERVOSYSTEM 121 - 460

IndianOil

GRADES AVAILABLE - SERVOSYSTEM 121/176/220/320/460

DESCRIPTION
Servosystem oils are high quality circulation oils designed for use in a wide variety of industrial equipment. These oils are incorporated with specially selected sludge dispersant, which prevents the deposition of harmful oil-insoluble sludge and varnish in circulating systems, even on extended service.

APPLICATION
These oils are particularly suitable for lubrication of anti-friction particularly of paper mill dryer rolls, plastic film calendars and paper corrugators where the excellent resistance of these oils, to the formation of harmful deposits, results into outstanding benefits. These oils find wide usage as gear and bearing lubricants in coal pulverizers and a variety of other ore and rock crushing machinery. These oils are also extensively used for long, trouble free operation of compressors, machine tools, hydraulic systems, circulating oil systems and small enclosed gears where EP lubricants are not necessary.

PERFORMANCE BENEFITS
- Provide long term protection against rust and corrosion
- Have resistance to the formation of sludge and deposits in the system
- Provide long life to moving parts due to adequate anti-wear properties
- Have reduced foaming tendency
- Ensure longer intervals between oil changes and
- Ensure longer intervals between oil changes and system clean ups

MANUFACTURERS APPROVAL
Servosystem oils are approved by the leading machinery manufactures, such as:
- S.L.M. Maneklal Industries Ltd., Ahmedabad
- Tat Robins-Fraser Ltd., Jamshedpur

CHARACTERISTICS

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>121*</th>
<th>176*</th>
<th>220</th>
<th>320</th>
<th>460</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity, cSt @ 40°C</td>
<td>118-124</td>
<td>170-180</td>
<td>210-230</td>
<td>315-350</td>
<td>440-500</td>
</tr>
<tr>
<td>Viscosity Index, Min.</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Flash Point (COC), °C Min</td>
<td>220</td>
<td>230</td>
<td>230</td>
<td>230</td>
<td>260</td>
</tr>
<tr>
<td>Pour Point, °C Max</td>
<td>(-) 3</td>
<td>(-) 3</td>
<td>(-) 3</td>
<td>(-) 3</td>
<td>(-) 3</td>
</tr>
</tbody>
</table>

* Non ISO VG

HEALTH & SAFETY
These oils are unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of industrial and personal hygiene are maintained.

For further information please contact our nearest office OR:
Technical Services Dept., Indian Oil Corporation Ltd., G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai – 400 051
E-Mail: tservices@indianoil.co.in OR tech_services@indianoil.co.in