**White Oil**

Phillips 66® White Oil is a highly refined, premium quality mineral oil developed for use in food processing plants, consumer products, and in other applications that require an exceptionally pure white mineral oil. It meets or exceeds the highest industry standards for purity and stability. All viscosity grades are registered by NSF International as H1 lubricants for use where incidental food contact may occur, and are certified Kosher and Pareve. They also are certified as meeting Canadian Food Inspection Agency requirements for use in federally registered food plants.

White Oil is manufactured with hydroprocessed base oils of the highest purity. It contains Vitamin E as a natural oxidation inhibitor and remains colorless, odorless, and tasteless during normal storage and service life. It is non-toxic and has outstanding storage stability.

White Oil meets FDA requirements for use in applications where direct, indirect, or incidental contact with food may occur. It may be used to lubricate machinery, protect against moisture, or control dust on grains and animal feed. It also is used as a component in certain consumer products such as cosmetics and pharmaceuticals. The 340/365 grade also is registered as NSF 3H for use as a release agent to prevent sticking on grills, ovens, chopping boards, and other hard surfaces in contact with meat and poultry.

**Applications**

- Food processing, bottling and canning equipment
- Protective coating for raw fruits and vegetables
- Egg shell sealant in facilities operating under the USDA voluntary shell egg grading program
- Non-stick release agent in meat and poultry plants
- Dust suppressant for grain or animal feed
- Drip oil for deep well water pumps
- Process oil or diluent in adhesives, sealants, caulks, cosmetics, pharmaceuticals, rubber extender oils and plastics
- Smoke oil for air shows
- Textile lubricants
- Household cleaners and polishes

White Oil meets the requirements of the following government and industry specifications:

- Canadian Food Inspection Agency (CFIA) requirements for use in federally registered food plants (incidental food contact)
- Cosmetic, Toiletry, and Fragrance Association (CTFA)
- FDA Code of Federal Regulations:
  - 21 CFR 172.878 for direct food contact
  - 21 CFR 178.3620 for indirect food contact
• National Formulary (NF) (Grades 50/60, 65/75, 80/90)
• NSF International H1 and former 1998 USDA H1 guidelines for incidental food contact (Registration Nos. 137240, 137241, 137242, 137243, 137244)
• USDA voluntary shell egg grading program, for protective coating (Grades 50/60, 65/75 and 80/90)
• United States Pharmacopoeia (USP) (Grades 200/215, 340/365)

Features/Benefits
• Colorless, odorless and tasteless
• Excellent color stability
• Contains Vitamin E for oxidation inhibition
• Non-staining
• Certified Kosher and Pareve

White Oil

<table>
<thead>
<tr>
<th>Typical Properties</th>
<th>50/60</th>
<th>65/75</th>
<th>80/90</th>
<th>200/215</th>
<th>340/365</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO Grade</td>
<td>7/10</td>
<td>10/15</td>
<td>15</td>
<td>32/46</td>
<td>68</td>
</tr>
<tr>
<td>Specific Gravity @ 60°F</td>
<td>0.842</td>
<td>0.853</td>
<td>0.853</td>
<td>0.865</td>
<td>0.876</td>
</tr>
<tr>
<td>Density, lbs/gal @ 60°F</td>
<td>7.01</td>
<td>7.10</td>
<td>7.10</td>
<td>7.20</td>
<td>7.29</td>
</tr>
<tr>
<td>Color, Saybolt</td>
<td>+30</td>
<td>+30</td>
<td>+30</td>
<td>+30</td>
<td>+30</td>
</tr>
<tr>
<td>Flash Point (COC), °C (°F)</td>
<td>174 (345)</td>
<td>177 (351)</td>
<td>183 (361)</td>
<td>210 (410)</td>
<td>225 (437)</td>
</tr>
<tr>
<td>Pour Point, °C (°F)</td>
<td>-9 (16)</td>
<td>-15 (5)</td>
<td>-15 (5)</td>
<td>-15 (5)</td>
<td>-15 (5)</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cSt @ 40°C</td>
<td>8.3</td>
<td>12.5</td>
<td>16.1</td>
<td>41.0</td>
<td>68.5</td>
</tr>
<tr>
<td>cSt @ 100°C</td>
<td>2.3</td>
<td>2.9</td>
<td>3.4</td>
<td>6.1</td>
<td>8.0</td>
</tr>
<tr>
<td>SUS @ 100°F</td>
<td>55.0</td>
<td>71.7</td>
<td>87.5</td>
<td>212</td>
<td>358</td>
</tr>
<tr>
<td>SUS @ 210°F</td>
<td>34.0</td>
<td>36.0</td>
<td>37.7</td>
<td>46.7</td>
<td>53.1</td>
</tr>
<tr>
<td>Viscosity Index</td>
<td>83</td>
<td>68</td>
<td>72</td>
<td>91</td>
<td>78</td>
</tr>
</tbody>
</table>

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via [http://www.phillips66.com/EN/products/Pages/MSDS.aspx](http://www.phillips66.com/EN/products/Pages/MSDS.aspx).

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.