



# TECHNICAL DATA

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## #119 WHITE INDUSTRIAL OIL ISO 22 TO 100

White Industrial Oil is a anti-wear non-staining oil that is specially formulated for the lubrication of spinning and twister spindles, spinning rings and knitting machines found in textile mills and cotton mills.

White Industrial Oil is blended from the finest high viscosity index solvent refined hydro-finished 100% pure paraffin base stocks available. These high viscosity index 100% pure paraffin base stocks provide White Industrial Oil with the following characteristics:

1. Excellent Thermal Stability
2. Excellent Resistance to Oxidation and Thermal Degradation
3. A Naturally High Viscosity Index. This results in a minimum change in viscosity that helps prevent excessive leakage, sluggish operation and lower overall efficiency and other deficiencies attributed to low viscosity index oils over wide operating temperature ranges.
4. Excellent Film Strength. This results in increased wear protection.
5. Excellent Operating Temperature Reduction. 100% pure paraffin base oils have better specific heat values, (less heat is absorbed) and better thermal conductivity than convention base oils. These combined properties help reduce operating temperatures.
6. Superior Chemical Stability
7. Low Volatility
8. Low Carbon Forming Tendencies.

Blended into these 100% pure paraffin base stocks is a highly specialized additive package that provides White Industrial Oil with the following properties:

1. Excellent Resistance to Foaming
2. Superior Hydrolytic Stability – This allows White Industrial Oil to have the ability to separate from water much faster and more completely when high humidity or high water conditions exist. These properties result in extended spindle, ring and needle life, anti-wear protection and improved rust and corrosion protection.
3. Excellent Rust and Corrosion Protection.
4. Reduction In Operating Temperatures.
5. Exceptional Anti-Wear Protection.
6. Reduced Sludge, Varnish and Deposit Formation.
7. Extended Equipment Life.

White Industrial Oil can also be used as a general purpose lube for the lubrication of chains, along with being used as a weaving oil in Sulzer type weaving machines.

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| <b>ISO Grade</b>                                | <b>22</b>  | <b>32</b>   | <b>46</b>   | <b>68</b>   | <b>100</b>   |
|---|------------|-------------|-------------|-------------|--------------|
| AGMA Grade                                      | ----       | ----        | 1           | 2           | 3            |
| Specific Gravity @ 15.5°C (60°F)                | 0.8578     | 0.8618      | 0.862       | 0.8662      | 0.8719       |
| Viscosity, SUS @ 38°C (100°F) (ASTM D-445)      | 88.6-110   | 149.6-205.5 | 224.3-241   | 279-345.9   | 498.2-519.40 |
| Viscosity @ 40°C, cSt (ASTM D-445)              | 16.3-21.00 | 29.00-40.00 | 44.00-47.00 | 54.00-67.00 | 95.00-100    |
| Viscosity @ 100°C, cSt (ASTM D-445)             | 3.3-4.2    | 5.2-6.5     | 6.5-7.5     | 7.5-9.1     | 10.00-12.00  |
| Viscosity Index (ASTM D-2270)                   | 100        | 112         | 110         | 105         | 110          |
| Flash Point °F/°C (ASTM D-92)                   | 383°/195°  | 405°/207°   | 415°/213°   | 430°/221°   | 457°/236°    |
| Fire Point °F/°C (ASTM D-92)                    | 410°/210°  | 435°/224°   | 445°/229°   | 460°/238°   | 485°/252°    |
| Pour Point °F/°C (ASTM D-97)                    | 10°/-12°   | 10°/-12°    | 10°/-12°    | 15°/-9°     | 15°/-9°      |
| Copper Strip Corrosion Test (ASTM D-130)        | 1a         | 1a          | 1a          | 1a          | 1a           |
| Rust Test (ASTM D-665)                          |            |             |             |             |              |
| Procedure A (Distilled Water)                   | Pass       | Pass        | Pass        | Pass        | Pass         |
| Procedure B (Salt Water)                        | Pass       | Pass        | Pass        | Pass        | Pass         |
| Demulsibility Test (ASTM D-1401)                |            |             |             |             |              |
| Oil-Water-Emulsion                              | 40-40-0    | 40-40-0     | 40-40-0     | 40-40-0     | 40-40-0      |
| Minutes   | 20         | 20          | 20          | 20          | 20           |
| Oxidation Stability Test (ASTM D-943)           |            |             |             |             |              |
| Hours to TAN of 2                               | 3,500      | 3,500       | 3,500       | 3,500       | 3,500        |
| Sludge Tendencies (ASTM D-4310)                 |            |             |             |             |              |
| Total Sludge, mg                                | ----       | 36          | 36          | 36          | 36           |
| Four Ball Wear Test (ASTM D-4172)               |            |             |             |             |              |
| (1 hour/40kg/130°F/54°C)                        |            |             |             |             |              |
| Wear Scar Diameter, mm                          | 0.45       | 0.4         | 0.4         | 0.4         | 0.4          |
| Four Ball EP Test (ASTM D-2783)                 |            |             |             |             |              |
| Weld Point, kgs.                                | ----       | 250         | 250         | 250         | 250          |
| Falex Continuous Load Procedure A (ASTM D-3233) |            |             |             |             |              |
| Failure Load, lbs.                              | ----       | 1740        | 1740        | 1740        | 1740         |
| Conradson Carbon Residue (ASTM D-189)           | 0.03       | 0.03        | 0.03        | 0.03        | 0.03         |
| Total Acid Number (ASTM D-664)                  | 0.5        | 0.5         | 0.5         | 0.5         | 0.5          |

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|--------------------------------------|-----------|-----------|-----------|-----------|------------|
| Vickers Pump Wear Test (ASTM D-2882) |           |           |           |           |            |
| 100 hours @ 1000psi @ 150°F/66°C)    |           |           |           |           |            |
| Weight Loss, mg                      |           |           |           |           |            |
| Ring                                 | ----      | 10        | 10        | 10        | 10         |
| Vane                                 | ----      | 1.5       | 1.5       | 1.5       | 1.5        |
| Total Weight Loss                    | ----      | 11.5      | 11.5      | 11.5      | 11.5       |
| Vickers Pump Wear Test (ASTM D-2882) |           |           |           |           |            |
| 100 hours @ 2000psi @                |           |           |           |           |            |
| 150°F/66°C)                          |           |           |           |           |            |
| Weight Loss, mg                      |           |           |           |           |            |
| Ring                                 | ----      | 15        | 15        | 15        | 15         |
| Vane                                 | ----      | 5         | 5         | 5         | 5          |
| Total Weight Loss                    | ----      | 20        | 20        | 20        | 20         |
| % Evaporation Loss (ASTM D-972)      |           |           |           |           |            |
| 6.5 hours @ 400°F/204°C              | ----      | 10        | 10        | 10        | 10         |
| % Evaporation Loss (ASTM D-972)      |           |           |           |           |            |
| 22 hours @ 225°F/107°C               | 6         | 2         | 2         | 2         | 2          |
| Foam Test (ASTM D-892)               |           |           |           |           |            |
| Sequence I                           | 0/0       | 0/0       | 0/0       | 0/0       | 0/0        |
| Sequence II                          | 0/0       | 0/0       | 0/0       | 0/0       | 0/0        |
| Sequence III                         | 0/0       | 0/0       | 0/0       | 0/0       | 0/0        |
| FZF A/8.3/90 (ASTM D-5182)           |           |           |           |           |            |
| Load Failure Stage                   | 11th      | 11th      | 11th      | 11th      | 11th       |