

# JAX THERMA-FLO SERIES

## PRODUCT DESCRIPTION

JAX Therma-Flo Series are high quality heat transfer fluids for use in closed loop, liquid phase heating and cooling systems to 600°F. The JAX Therma-Flo Series is produced using an advanced hydrocracking and catalytic dewaxing process that yields an extremely pure colorless product, free of aromatics, polar compounds and sulfur. Key benefits include:

- Superior Thermal and Oxidative Stability
- High Purity Group II+ Base Oils
- High Energy Efficiency
- Non-Fouling
- Food-Grade

These properties create distinct advantages in a wide variety of heat transfer fluid applications.

## STABILITY

JAX Therma-Flo fluids are free of impurities and are much more resistant than other oils to thermal and oxidative degradation. The exceptional stability when exposed to heat makes it ideal for high-temperature environments, such as temperature control of batch reactors, in heat recovery from process streams and exhaust gases and in large centralized systems with multiple heat sink applications. In food-processing applications, JAX Therma-Flo provides outstanding performance for indirect heating loops for deep frying and baking.

## FOOD-GRADE INTEGRITY

JAX Therma-Flo Series meets the requirements of 21 CFR 178.3570 for incidental food contact. It is formulated for use as a heat transfer fluid in plants operating under the Federal Meat and Poultry Inspection Program.

## EFFICIENCY

Heating and cooling transfer efficiencies are heavily influenced by the physical properties of the fluid (i.e. density, heat capacity, thermal conductivity and specific heat.) JAX Therma-Flo is specifically formulated to maximize these performance properties, resulting in more efficient use of energy than many other fluids currently available. JAX Therma-Flo minimizes pressure drop, reducing pump horsepower requirements while heater outlet temperatures can be reduced due to JAX Therma-Flo's superior high heat transfer film coefficients, allowing for lower approach temperatures.

## NON-FOULING

JAX Therma-Flo incorporates a unique, proprietary dispersant designed specifically for high-temperature applications. All organic heat transfer fluids undergo thermal degradation over time, resulting in the formation of soft carbon materials (sludge). Non-dispersant oils, including conventional synthetics or low quality oils, are ill-equipped to handle this sludge formation. They lack the ability to hold the sludge in suspension for removal by filtration or fluid change out. The sludge agglomerates, eventually coating system surfaces. Because the coating acts as an insulator, heat transfer rates are reduced, resulting in longer heat-up time, lower heating and production efficiency and, in extreme cases, burnout of heater elements. JAX Therma-Flo's unique dispersancy eliminates sludge agglomeration and suspends the particles for elimination by filtration or until fluid change-out. Heat transfer surfaces remain clean and system performance remains constant.



# THERMA-FLO SERIES

| Typical Property                            | Therma-Flo 22<br>Part # THFLOG | Therma-Flo 32<br>Part # THFLOH |
|---|--------------------------------|--------------------------------|
| Specific Gravity @ 60°F (15.5°C)            | 0.840                          | 0.864                          |
| Density, lb/gal @ 60°F (15.5°C)             | 7.00                           | 7.21                           |
| Viscosity:                                  |                                |                                |
| cSt @ 40°C                                  | 20.5 - 22.0                    | 33.5 - 35.2                    |
| cSt @ 100°C                                 | 4.2 - 5.0                      | 5.5 - 5.7                      |
| Pour Point, °F (°C)                         | -40 (-40)                      | -34 (-36)                      |
| Flash Point °F (°C)                         | 430 (221)                      | 435 (224)                      |
| Fire Point, °F (°C)                         | 460 (238)                      | 471 (244)                      |
| Atm. Boiling Point (10%), °F (°C)           | 626 (330)                      | 633 (334)                      |
| Color, Saybolt                              | 30                             | 30                             |
| Color, ASTM                                 | <0.5                           | <0.5                           |
| Sulfur, ppm                                 | <1                             | <1                             |
| Maximum Film Temperature, °F (°C)           | 626 (330)                      | 640 (338)                      |
| Maximum Recommended Operating Temp, °F (°C) | 600 (316)                      | 600 (316)                      |
| Coefficient of Thermal Expansion            | 0.00035/°F<br>0.00063/°C       | 0.00035/°F<br>0.00053/°C       |
| Heat of Combustion                          | 19660 BTU/lb.<br>45.7 MJ/kg    | 19660 BTU/lb.<br>45.7 MJ/kg    |
| Heat of Vaporization @ 600°F (316°C)        | 92 BTU/lb.<br>214 kJ/kg        | 92 BTU/lb.<br>214kJ/kg         |
| NSF Reg. No. / Category Code                | 141318 / H1                    | 141319 / H1                    |



### Container Sizes & Part Numbers

Product part numbers consist of the prefix number listed below each product at the top of the page, plus the suffix shown behind each container size below. (Part # - container size.) Please note that not all products are available in all container sizes.

|                       | Part #     | Part #     |
|-----------------------|------------|------------|
| 275 Gallon Tote - 275 | THFLOG-275 | THFLOH-275 |
| 110 Gallon Tote - 110 | THFLOG-110 | THFLOH-110 |
| 55 Gallon Drum - 055  | THFLOG-055 | THFLOH-055 |
| 16 Gallon Keg - 016   | THFLOG-016 | THFLOH-016 |
| 5 Gallon Pail - 005   | THFLOG-005 | THFLOH-005 |
| 4-1 Gallon Case - 004 | THFLOG-004 | THFLOH-004 |