

PRODUCT DATA SHEET



NO-TOX® HD FOOD GRADE OIL

No-Tox HD Food Grade Oil, commonly known as No-Tox HD Oil, is a series of multipurpose white mineral lubricating oils that are NSF H1 registered for use where incidental food contact may occur. **No-Tox HD Food Grade Oil**, available in 12 grades from ISO VG 15 to 1000, is designed to give exceptional anti-wear, rust and corrosion protection in a wide range of applications including hydraulic systems, gear cases, chains, compressors, bearings and circulating systems and other applications found in the "clean" industries such as food, beverage, pharmaceutical and personal care products.

Applications

- Suitable for multi-service applications
- ♦ Hydraulic pumps, motors, actuators
- ♦ Compressors and vacuum pumps
- Enclosed gears including spur, bevel and worm gears
- Circulating systems, chains, bearings, spindles, joints and others

Features and Benefits

| ♦ | NSF H1 registered | Use where incidental food contact may occur. |
|----------|--------------------------------|---|
| • | Compliances | Kosher and Pareve approved. Halal certified. |
| • | Bacteriological protection | Effectively inhibits the growth of certain bacteria, yeast and mold in the lubricant. |
| • | Excellent anti-wear properties | Excellent equipment protection. |
| ♦ | High demulsibility | Excellent water separability. |
| • | Rust and oxidation protection | Long, trouble-free service life. |

General Description

No-Tox HD Food Grade Oil is a series water-white, odorless and tasteless mineral base lubricating oils for a wide range of "clean" industries applications. **No-Tox HD Food Grade Oil** is filtered through a 2-micron filter system to achieve the highest cleanliness standards. **No-Tox HD Food Grade Oil**, formulated with the highest quality USP white mineral oils and food grade additives, meets NSF H1 and FDA requirements for materials that may have incidental contact with food as defined under Title 21 CFR, 178.3570. It is Kosher and Pareve approved, as well as Halal certified.

Product No. 301060, 301002, 301061, 301240, 300931, 301578, 301579, 301241, 300920, 301242, 301580, 301581

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With continual research and development, Calumet reserves the right to change the information contained herein. The Company is not responsible for misuse or misapplication of its products.

NO-TOX® HD FOOD GRADE OIL

TYPICAL PROPERTIES

| Product No. | <u> 301060</u> | <u> 301002</u> | <u> 301061</u> | <u> 301240</u> |
|--|-----------------|-----------------|-----------------|-----------------|
| Old Product No. | <u>62680</u> | <u>62681</u> | <u>62682</u> | <u>62683</u> |
| ISO Viscosity Grade | 15 | 22 | 32 | 46 |
| Viscosity, ASTM D445 @ 40°C, cSt @ 100°C, cSt | 14.6 3.33 | 21.3 4.21 | 32.4 5.42 | 45.9 6.81 |
| Viscosity, ASTM D2161 @ 100°F, SUS @ 210°F, SUS | 80.6 37.5 | 112 40.4 | 167 44.4 | 237 49.1 |
| Viscosity Index, ASTM D2270 | 96 | 100 | 101 | 102 |
| Pour Point, ASTM D97 °C (°F) | -18 (0) | -18 (0) | -18 (0) | -18 (0) |
| Copper Strip Corrosion, ASTM D130 3 hrs @ 100°C, rating | 1a | 1a | 1a | 1a |
| Rust Test, ASTM D665, Procedure A & B | Pass | Pass | Pass | Pass |
| Foam Test, ASTM D892 Sequence I, II, III, ml/ml | Nil | Nil | Nil | Nil |
| Falex EP Test, ASTM D3233 Method B Non-seizure Load, lbf | 1500 | 1500 | 1500 | 1500 |
| 4-Ball Wear Test, ASTM D4172 @ 1200 rpm, 40 kg, 1 hr, 75°C Scar Diameter, mm | 0.40 | 0.40 | 0.40 | 0.40 |
| Vickers Vane Pump Test, ASTM D7043 Total Mass Loss, mg | <15 | <15 | <15 | <15 |
| FZG Visual Test, ASTM D5182 Failure Load Stage | | | | |
| Specific Gravity, ASTM D1298, 60/60°F | 0.851 | 0.860 | 0.862 | 0.866 |
| Color | Water- white | Water- white | Water- white | Water- White |
| Page 2 of 4 With continual research and development, C contained herein. The Company is not response | | | | 1/2/2018 |

NO-TOX® HD FOOD GRADE OIL

TYPICAL PROPERTIES

| Product No. | <u> 300931</u> | <u>301578</u> | <u> 301579</u> | <u> 301241</u> |
|--|-----------------|-----------------|-----------------|-----------------|
| Old Product No. | <u>62684</u> | <u>62685</u> | <u>62686</u> | <u>62687</u> |
| ISO Viscosity Grade | 68 | 100 | 150 | 220 |
| Viscosity, ASTM D445 @ 40°C, cSt @ 100°C, cSt | 67.1 8.74 | 104 11.7 | 151 15.5 | 228 20.5 |
| Viscosity, ASTM D2161 @ 100°F, SUS @ 210°F, SUS | 348 55.7 | 542 66.6 | 791 81.8 | 1201 103 |
| Viscosity Index, ASTM D2270 | 102 | 100 | 105 | 105 |
| Pour Point, ASTM D97 °C (°F) | -18 (0) | -15 (5) | -15 (5) | -15 (5) |
| Copper Strip Corrosion, ASTM D130 3 hrs @ 100°C, rating | 1a | 1a | 1a | 1a |
| Rust Test, ASTM D665, Procedure A & B | Pass | Pass | Pass | Pass |
| Foam Test, ASTM D892 Sequence I, II, III, ml/ml | Nil | Nil | Nil | Nil |
| Falex EP Test, ASTM D3233 Method B Non-seizure Load, lbf | 1500 | 1500 | 1750 | 1750 |
| 4-Ball Wear Test, ASTM D4172 @ 1200 rpm, 40 kg, 1 hr, 75°C Scar Diameter, mm | 0.40 | 0.40 | 0.40 | 0.40 |
| Vickers Vane Pump Test, ASTM D7043 Total Mass Loss, mg | <15 | | | |
| FZG Visual Test, ASTM D5182 Failure Load Stage | | 12+ | 12+ | 12+ |
| Specific Gravity, ASTM D1298, 60/60°F | 0.872 | 0.874 | 0.879 | 0.882 |
| Color | Water- white | Water- white | Water- white | Water- white |
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NO-TOX® HD FOOD GRADE OIL

TYPICAL PROPERTIES

| Product No. | <u> 300920</u> | <u>301242</u> | <u> 301580</u> | <u> 301581</u> |
|---|-----------------|-----------------|-----------------|-----------------|
| Old Product No. | <u>62688</u> | <u>62689</u> | <u>62690</u> | <u>62691</u> |
| ISO Viscosity Grade | 320 | 460 | 680 | 1000 |
| Viscosity, ASTM D445 @ 40°C, cSt @ 100°C, cSt | 318 26.6 | 452 35.8 | 667 50.2 | 983 66.8 |
| Viscosity, ASTM D2161 @ 100°F, SUS @ 210°F, SUS | 1681 131 | 2392 174 | 3535 243 | 5234 323 |
| Viscosity Index, ASTM D2270 | 110 | 119 | 130 | 133 |
| Pour Point, ASTM D97 °C (°F) | -14 (7) | -14 (7) | -13 (9) | -13 (9) |
| Copper Strip Corrosion, ASTM D130 3 hrs @ 100°C, rating | 1a | 1a | 1a | 1a |
| Rust Test, ASTM D665, Procedure A & B | Pass | Pass | Pass | Pass |
| Foam Test, ASTM D892 Sequence I, II, III, ml/ml | Nil | Nil | Nil | Nil |
| Falex EP Test, ASTM D3233 Method B Non-seizure Load, lbf | 1750 | 1750 | 1750 | 1250 |
| 4-Ball Wear Test, ASTM D4172 @ 1200 rpm, 40 kg, 1 hr, 75°C Scar Diameter, mm | 0.40 | 0.40 | 0.40 | 0.40 |
| Vickers Vane Pump Test, ASTM D7043 Total Mass Loss, mg | | | | |
| FZG Visual Test, ASTM D5182 Failure Load Stage | 12+ | 12+ | 12+ | 12+ |
| Specific Gravity, ASTM D1298, 60/60°F | 0.880 | 0.888 | 0.888 | 0.888 |
| Color | Water- white | Water- white | Water- white | Water- white |
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