



# TECHNICAL DATA

102 Barton Street, St. Louis, Missouri 63104

In-State (314) 865-4100/Out of State 800-325-9962/Fax (314) 865-4107 <http://www.schaefferoil.com>

---

## #280 FOOD GRADE HTC

Food Grade HTC is an anti-wear, food grade oil that is specially formulate for use in the lubrication of food, feed and pharmaceutical processing and packaging equipment, especially those pieces of equipment that are subjected to high loads and high moisture conditions.

Food Grade HTC meets the requirements for a USDA H-1 quality lubricant and the requirements of the United States Code of Federal Regulations 21CFR 178.3570, 178.3620(b), and 573.680 of the United States Food and Drug Administration's Regulations.

Food Grade HTC can be used in the lubrication of all types of compressors, hydraulic, vacuum pump, pump, airline, chain, bearing, and general oiling applications where there is a chance of incidental contact with food, foodstuffs, drinking water, potable water, or ground water may occur. Typically, these applications can be found in the following industries:

Meat and Poultry Processing Plants  
Fish and Seafood Processing Plants  
Soft Drink and Bottling Plants  
Cheese and Cheese Product Producers  
Snack Food Manufacturers  
Pet Food and Animal Feed Producers  
Pharmaceutical and Drug Manufacturers  
Food and Beverage Container Manufacturers  
Water Well Drillers

Egg Processing Plants  
Breweries and Wineries  
Vegetable and Fruit Processors  
Bakeries  
Pasta Manufacturers  
Oil Mills and Seed Cake Processors  
Cosmetic Manufacturers  
Paper and Paperboard Manufacturers  
Drinking and Potable Water Treatment Plants

Continued on Next Page

Food Grade HTC is blended from the finest quality, highly refined, severely hydro-finished, purified, non-toxic, non-staining 100% paraffin base technical white and U.S.P. grade white oils available. Combined with these paraffin base technical white oils is a specialized non-toxic food grade approved additive package, which provides the Food Grade HTC with the following performance characteristics:

1. Excellent lubricity and film strength
2. Enhanced oxidative stability
3. Excellent resistance to thermal degradation
4. A high viscosity index
5. Excellent hydrolytic stability and resistance to emulsification
6. Excellent resistance to acidic compounds
7. Exceptional anti-wear and load carrying capabilities
8. Excellent rust and corrosion inhibition
9. Excellent anti-foam and air release properties
10. Protection against rancidity and build up due to bacterial and fungal growth
11. Longer service life and less deposit formation

Typical Properties on Next Page

<b>ISO Grade</b>	<b>22</b>	<b>32</b>	<b>46</b>	<b>68</b>	<b>100</b>	<b>150</b>	<b>220</b>
SAE Grade	5	10	20	20	30	40	50
AGMA Grade	----	----	1	2	3	4	5
Specific Gravity @ 15.5°C (60°F)	0.8578	0.8618	0.862	0.8662	0.8719	0.8693	0.8766
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	734.6-821.9	1051.9-1250
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	140-157	200-230
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	14.00-16.00	18.70-20.70
Viscosity Index (ASTM D-2270)	100	112	110	105	110	105	105
Flash Point °F/°C (ASTM D-92)	383°/195°	405°/207°	415°/213°	430°/221°	457°/236°	477°/247°	454°/237°
Fire Point °F/°C (ASTM D-92)	410°/210°	435°/224°	445°/229°	460°/238°	485°/252°	495°/247°	480°/249°
Pour Point °F/°C (ASTM D-97)	10°/-12°	10°/-12°	10°/-12°	15°/-9°	15°/-9°	-20°/-7°	30°/-1°
Copper Strip Corrosion Test (ASTM D-130)	1a	1a	1a	1a	1a	1a	1a
Rust Test (ASTM D-665)							
Procedure A (Distilled Water)	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Procedure B (Salt Water)	Pass	Pass	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	40-40-0	40-40-0
Minutes	20	20	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	3,500	3,500
Sludge Tendencies (ASTM D-4310)							
Total Sludge, mg	----	36	36	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	0.4	0.4
Four Ball EP Test (ASTM D-2783)							
Weld Point, kgs.	----	250	250	250	250	315	315
Falex Continuous Load Procedure A (ASTM D-3233)							
Failure Load, lbs.	----	1740	1740	1740	1740	1800	1950
Conradson Carbon Residue (ASTM D-189)	0.03	0.03	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	0.5	0.5

Continued on Next Page

