



TECHNICAL DATA

*Al Malik Petroleum Products Trading Co. , *Tel: 04-2667117 *Fax: 04-2626487*

Delta Hydrex

Delta Hydrex is a truly multi purpose Semi Synthetic Blend general purpose industrial oil with extra anti-wear protection and higher temperature resistance.

Delta Hydrex can be used in all types of industrial HTC (Hydraulic, Turbine, and Compressor) applications, enclosed gear boxes where non-E.P. oil is required, Vacuum pumps, bearings and airlines.

Excellent Oxidation Resistance – Extended Service Life.

Delta Hydrex is blended only from the finest severely hydro-finished 100% pure paraffin base oils which undergo extra solvent refining processes and semi synthetic poly alpha olefin (PAO) Base oil ,plus 80/20 base oil. to ensure achieving optimum quality and highest oxidation resistance. Due to the uniform molecular structure (closed & saturated), oxidation which results in oil thickening, build up of Acidic and carbon sludge, is greatly reduced.

Delta Hydrex has an extended service life with superior protection and better resistance to thermal degradation.

Better start – ups in cold weather

Due to the natural high viscosity index of **Delta HYDREX** base oils, oil drag and friction is greatly reduced at cold start up, yet **Delta HYDREX** will retain its viscosity and oil pressure at continuous high loads and elevated temp .

Lower Volatility – Excellent Film Strength

Further blended into **Delta HYDREX** superior base oils are unique and exclusive additive packs and high shear stable viscosity index improver polymers, which increase oil film strength and adhesive & cohesive properties, further reduce oil volatility thus ensuring better lubrication and less oil consumption.

Excellent Protection against Hardening Of Seals.

Delta Hydrex contains unique additives that protect leather seals from hardening and .cracking. Replacing seals are very time consuming



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Excellent Anti-Wear Protection.

Delta Hydrex rich content of MoS₂ and other solid lubricants, adhere tenaciously to metal surfaces forming a thin layer of a long lasting, indestructible by heat or extreme pressure, solid lubricating film, that will not be wiped away and protect these surfaces from wear even under adverse and severe shock loading and vibration.

Typical Properties

ISO Grade	32	46	68
AGMA Grade	1	1	2
API Gravity 60°F 34.8	34.8	31.16	32.32
Specific Gravity 60°F	0.8509	0.8699	0.8638
Viscosity Cst 40°C (ASTM D-445)	27.00-33.50	45.0-51.2	65.00-74.00
Viscosity Cst 100°C (ASTM D-445)	4.9-5.6	6.72-7.3	8.66-9.47
Viscosity Index (ASTM D-2270)	104	102	105
Viscosity SUS 100°F (ASTM D-445)	139.7-180.4	232-264.3	336.2-383.4
Brookfield Viscosity (ASTM D-2893)			
cP @ 0°F	3204	4060	-----
Borderline Pumping Temperature °F/°C ASTM D-3829	-10°/-23.33°	-10°/-23.33°	0°/-17.78°
Flash Point °F/°C (ASTM D-92)	338/170	375/191	433/223
Fire Point °F/°C ASTM D-92	377/192	417/214	433/223
Pour Point °F/°C ASTM D-97	-25°/-31.67°	-25°/-31.67°	-10°/-23.33°
Total Acid Number (ASTM D-664)	0.5-0.9	0.5-0.9	0.5-0.9
Conradson Carbon Residue (ASTM D-189)			
%Residue	0.01	0.01	0.01
Oxidation Stability Test (ASTM D-943)			
Hr to Tan of 2	4000	4000	4000
Sludge Tendencies (ASTM D-4310)			
Total Sludge, mg	36	36	36
Copper wt. loss, mg	22	22	22
Iron wt. loss, mg	0.1	0.1	0.1
Four Ball Wear Test (ASTM D-4172) (1 hr/40kg/130°F)			
Mean Scar Diameter, mm	0.45	0.45	0.45
Four Ball Wear Test (ASTM D-4172) (1hr/20kg/130°F)			
Mean Scar Diameter, mm	0.27	0.27	0.27
Four Ball Wear E.P. Test (ASTM D-2783)			
Weld Load, kg	126	126	160
Load Wear Index	26.2	26.2	27.7
Falex Continuous Load (ASTM D-3233)			
Failure Load, lbs	1250	1250	1250
FZG Gear Test (ASTM-5182)			
Load Stage Pass	12th	12th	12th
Hydrolytic Stability (ASTM D-2619)			
Copper Wt Loss mg/cm ²	0.1	0.1	0.1
Acidity of Water mg/KOH	0.05	0.05	0.05
Demulsibility (ASTM D-1401)			
O-W-E	40-40-0	40-40-0	40-40-0
Time	15	15	15
Dennison Filterability Test			



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Time, w/o (sec)	112	112	112
Time, w/water (sec)	146	146	146
Air Release Properties			
Time @ 50°C/122°F	0.5	0.5	1
% Evaporative Loss @700°F/370.11°C			
(ASTM D-2887)	4.90%	4.90%	5.00%
Denison T5D-042 Pump Test			
in wear, vane	0.0094	0.0094	0.0094
Vickers 35VQ25 Pump Test			
Wt. loss vane, mg	5	5	5
Wt. loss cam, mg	11	11	11
Total wt. loss	16	16	16
Thermal Stability (Cincinnati Millicron			
Method 68 hrs./135°C/copper steel catalyst)			
Sludge mg/100 ml	2	2	2
Condition of copper rod	1	1	1
Condition of steel rod	1	1	1
Vickers Pump Wear Test (ASTM D-2882)			
Mg Wt Loss	12	12	12
Foam Test (ASTM D-892)			
Sequence I	0/0	0/0	0/0
Sequence II	0/0	0/0	0/0
Sequence III	0/0	0/0	0/0
Rust Test (ASTM D-665)			
Procedure A-Distilled Water	Pass	Pass	Pass
Procedure B-Salt Water	Pass	Pass	Pass
Copper Strip Corrosion Test (ASTM D-130)			
3 hrs	1a	1a	1a

DELTA HYDREX

ISO Grade	100	150	220
AGMA Grade	3	4	5
API Gravity 60°F 34.8	30.75	30.1	29.3
Specific Gravity 60°F	0.8721	0.8756	0.88
Viscosity Cst 40°C (ASTM D-445)	92.50-1 05.00	138.94-1 40.6	200-220. 5
Viscosity Cst 100°C (ASTM D-445)	10.90-1 1.89	14.17-14. 45	18.34-19 .59