

# ***FIRST LINE*** TURBINE HYDRAULIC OILS

*" The First Line of Defense Against Wear. "*

## **PRODUCT DESCRIPTION:**

First Line Turbine Hydraulic Oils are a series of rust and oxidation inhibited industrial oils for lubrication of gas, steam, and hydraulic turbines, hydraulic systems, and other enclosed circulating systems where an R & O Oil is required. First Line Turbine Oils offer extremely effective protection against system rusting caused by water contamination and protect against sludging and deposits caused by oil oxidation.

First Line Turbine Oils are blended from highly-refined, thermally stable high viscosity index paraffinic lube oil stocks and contain rust and oxidation inhibiting and anti-foam additives.

First Line Turbine Oils meet or exceed the following specifications:

- GEK 32568E
- GEK 107395
- British Standard 489
- Solar ES 9-224
- ABB HTGD 90117
- DIN 51524 Part 1

**Available in 55 gallon  
drums and bulk**

	Typical Inspections							
	Turbine 32	Turbine 46	Turbine 68	Turbine 100	Turbine 150	Turbine 220	Turbine 320	Turbine 460
ISO (ASTM) Grade	32(150)	46(215)	68(315)	100(465)	150(700)	220(1000)	320	460
API Gravity, 15.6°C (60°F)	30.7	29.9	27.3	28.6	28.4	27.7	28.1	28.1
Viscosity, cSt, (SUS), 40°C	31.32(147.3)	43.36(216)	64.71(300)	92.83(430)	126.96(588)	241.2(1119)	306(1628)	406(2435)
100°C	5.24(43.4)	6.76(48.3)	8.41(53.8)	10.52(61.1)	12.87(69.7)	19.61(96.9)	96(117)	32(157)
Viscosity Index	96	99	99	96	94	93	96	96
Flash Point, COC, C(°F) Min.	194(380)	218(425)	221(430)	238(460)	260(500)	271(520)	307(585)	310(590)
Pour Point, °C(°F) Max.	-18(0)	-15(+5)	-15(+5)	-15(+5)	-9(+15)	-9(+15)	-12(+10)	-9(+16)
Color, ASTM	1.0	1.0	1.5	2.0	3.0	3.0	3.5	4.5
Oxidation, ASTM D-943, Hrs.	>10000	>10000	>10000	>10000	>10000	>10000	>10000	>10000

The values shown here are typical of current production. All of them may vary within modest ranges.

**Hazards:** "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressure, cut weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition. "Empty" drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner.

Avoid prolonged contact with skin and frequently change soiled clothing. In case of contact, wash thoroughly with soap and water for 15 minutes or until the irritation subsides. The formation of mists should be avoided. Do not take internally. If swallowed, do not induce vomiting. Call physician of Poison Control Center immediately. Keep out of reach of children.