



Technilube Synthetic Compressor Lubricant 46AW

TECHNILUBE SYNTHETIC COMPRESSOR LUBRICANT (TSCL) 46 AW is a specially formulated polyalphaolefin (PAO) synthetic hydrocarbon lubricant giving improved lubrication a high and low temperatures, reduced volatility, and compatibility with mineral oils and equipment designed for use with mineral oils.

It is a long life lubricant made especially for rotary vane and screw compressors. It does not soften rubber compounds, as is the case with diester synthetics. It is compatible with conventional mineral oil compressor oils. There is no unusual conversion procedure when switching from petroleum oils to TSCL 46 AW. The unique properties of TSCL go far beyond conventional compressor lubricants. It has very high oxidation stability and 8000 hours of use are common. Actual life of the lubricant is determined by the operating temperature and the contaminants in the compressed air. The lubricant should be changed when the total acid number reaches a value of 1, or when the viscosity of the lubricant at 100° increases by 15%.

The PAO synthetic hydrocarbons have superior hydrolytic stability over petroleum and diester lubricants, which greatly increases lubricant life in the presence of moisture.

FEATURES: (Advantages of Use)

1. Outstanding oxidation and thermal stability.
2. Extended service life of lubricant.
3. Very wide operating temperature range due to high viscosity index.
4. Very low pour point permits easy start-up at very low ambient temperature.
5. Low varnish-forming tendencies as indicated by the Panel Coker Test.
6. Excellent anti-wear properties.
7. Provides excellent rust protection.
8. Lower maintenance cost.
9. Reduced danger of fires and explosions in compressed air systems as shown by very low carbon residue value after Pneurop Oxidation Test.

RECOMMENDATIONS:

In a rotary screw compressor, lubricant is injected into rotor chamber to absorb the heat generated during compression. The lubricant also lubricates rotors and bearings and seals the chamber against air leaks. A petroleum lubricant reaches the end of useful life after approximately 1000 hours of operation. Oxidation can start to form varnish and deposits in the compressor. In order to prevent varnish build-up, petroleum lubricants must be changed every 1000 hours. TSCL 46AW needs only to be changed every 8000 hours or two years, whichever comes first. In severe dusty conditions, greater attention must be given to air and coolant filters. Follow the manufacturer's recommended guidelines for filter and lubricant changes under sever operating conditions.

PROPERTIES

ISO Grade	46	
SAE Viscosity Classification	10W – 20	
Viscosity, Kinematic, cST @ 40° C.	46.07	
	cST @ 100° C.	7.7
	cST @ -40° C.	21600
Viscosity, Saybolt SUS. 100° F (37.8° C)	235	
	210° F (98.9° C)	52.2
Viscosity Index	134	
Flash, COC °C (° F)	268	(515)
Fire, COC °C (° F)	290	(590)
Auto ignition Temperature ° C (°F)	388	(730)
Pour: ° C (°F)	<-54	(<-65)
Color	Blue	
Carbon Residue, Rams: WT .%	0.30	
Rust Test, D 665	Procedure A	PASS
	Procedure B	PASS
Total Acid No., D664	0.12	
Foam Test, D 892		
5 min. blow/10 min. set		
sequence I	10/0	
sequence II	10/0	
sequence III	5/0	
Emulsion Test D 1401, 180° F	40-40-0	
S.O.D. Corrosion Test 325° F, 1 hr.		
Copper Wt. loss: mg/cm ²	1.29	
Lead Wt. loss: mg/ cm ²	0.12	
4-Ball Wear Test 1800 RPM 1 hr.		
10 Kg. @ 250° F, mm	0.32	
40 Kg. @ 302° F, mm	0.75	
Rotary Bomb Test, D 2272, min.	300+	
Pneurop Oxidation 200° C, 24 hrs.		
Evaporation loss: Wt.%	5.11	
Carbon Residue:	0.08	
Gravity API @ 60° F	37.6	
Weight/gallon	6.97	

VISCOSITY REQUIREMENTS FOR JOY TWISTAIR COMPRESSORS

<u>Temperature (° F)</u>	<u>TSCL 46AW</u>	<u>Joy Twistair Lube Specifications</u>
50	1050	1200 or less
100	235	160 – 210
210	52.2	47 or greater
Flash Point, °F	515	400 minimum
Pour Point, ° F	<-65	at least 20° F below lowest expected ambient temperature