HARP LUBRICANTS – TECHNICAL DATA SHEET

HARP MINERAL OILS

Harp International Limited offers a complete range of lubricants for the refrigeration and air conditioning industry. Harp's mineral oil (MO) series of products are made from naphthenic base crudes that are highly refined to provide proper lubrication in refrigeration and air conditioning systems.

The HARP MO series offers excellent chemical stability when in the presence of refrigerant and other compressor materials. The formulations have good thermal stability to ensure superior performance at high compressor operating temperatures as well as excellent low temperature properties to prevent congealing in the system evaporator. The oils are also wax-free to prevent floc problems in the evaporator and expansion valve.

PRODUCT TECHNICAL DATA

Property	HARP Mineral Oil Range			
	Harp MO32	Harp MO68	Harp MO100	Harp MOAB150
Viscosity:				
at 40°C (cSt)	29.55	59.7	96.8	29.6
at 100°C (cSt)	4.43	6.35	9.00	4.49
at 100°F (SUS)	154	314	515	158
Floc Point (°F)	-60	-55	-35	-65
Floc Point (°C)	-51.1	-48.3	-37.2	-53.9
Pour Point (°F)	-50	-30	-20	-47.5
Pour Point (°C)	-45.6	-34.4	-28.9	-44.2
Colour	<1.0	<1.5	<2.0	<1.0
Flash Point (°F)	345	375	400	365
Flash Point (°C)	174	191	204	185
Dielectric strenght (KV)	25	25	25	25
Specific gravity @ 60°F (g/cm^3)	0.910	0.921	0.916	0.894
Analine Point (°F)	175	177	197	ND
Analine Point (°C)	79.4	80.6	91.7	ND

note: all values listed are typical properties

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HARP LUBRICANTS – TECHNICAL DATA SHEET

HARP POLYOL ESTER OILS

Harp International Limited offers a complete range of lubricants for the refrigeration and air conditioning industry. The adoption of next generation hydrofluorocarbons (HFC) refrigerants has led to the specific development of synthetic lubricants such as polyol esters (POE) that are miscible with these working fluids. Miscibility and solubility between the refrigerant and lubricant determine how the two will behave throughout a refrigeration system.

The HARP POE range of lubricants offers excellent miscibility with HFC, HCFC refrigerants, including blends. These highly refined products also have has excellent chemical and thermal stability, as well as superior lubricity characteristics on steel and aluminium. To ensure that customers are able to use the correct polyol ester for any application, the HARP POE series of products are available in a wide range of viscosities - from ISO 22 to an ISO 68 – with other products available on request. Products come with a non intrusive additive package which is suitable for most applications.

HARP POE products are available in 0.95 litre, 3.79 litre, 18.93 litre and 208.2 litre steel containers and are packaged under an inert nitrogen atmosphere to ensure optimum product quality.

PRODUCT TECHNICAL DATA

Property	HARP polyolester lubricants range			
	HARP POE22	HARP POE32	HARP POE46	HARP POE68
Viscosity at 40°C (cSt)	18.9	32.5	45.3	65.5
at 100°C (cSt)	4.2	5.8	7.1	9.3
at 100°F (SUS)	115	166	232	337
Viscosity Index	128	122	116	120
Pour Point (°F)	-65	-49	-49	-45
Pour Point (°C)	-54	-45	-45	-43
Colour (Hazen ISO 2211)	< 150	< 150	< 150	< 150
Flash Point (°F)	464	496	500	518
Flash Point (°C)	240	258	260	270
Specific gravity @ 20°C (g/cm^3)	0.995	0.977	0.977	0.98
Total Acid number (g/mg)	<0.05	<0.05	<0.05	<0.05
Water (ppm max.)	< 50	< 50	< 50	< 50

note: all values listed are typical properties

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