

## Enersyn MP-S Range

### Synthetic Refrigeration Compressor Lubricant

#### Description

Enersyn MP-S is a range of refrigeration compressor lubricants formulated with Polyolester (POE) synthetic basestocks.

#### Application

The Enersyn MP-S lubricants are primarily intended to lubricate refrigeration compressors where Hydrofluorocarbon (HFC) refrigerant e.g. R-134a is in use.

Enersyn MP-S is not suitable for systems running on ammonia.

#### Main Performance Features

- Miscible with R-134a, R404A, R407C, R410A and R507 refrigerants.
- Can be used with other refrigerants (refer to compressor manufacturers details).
- Good thermal oxidative stability.
- Provides wear protection.

#### Approvals

Enersyn MP-S is approved by Bitzer, Bock and Carlyle/Carrier. Other refrigeration compressor manufacturers' approvals are in progress and MP-S conforms to the latest synthetic ester-based oil requirements of Sabroe for lubricant Codes E68 (MP-S 68), E100 (MP-S 100) & E220 (MP-S 220) and Stal Refrigeration.

#### Care and Handling

Conversion to R-134a refrigerant from R-12 necessitates a change in the type of lubricating oil. Changing over to Enersyn MP-S must be in accordance with the compressor manufacturers recommendations.

#### Packaging and Storage

Supplied in packs of 6 x 4 litre containers.

MP-S grades like all other POE synthetics are hygroscopic and will readily absorb water if exposed to moisture. It is therefore important to keep product in its original container and sealed before use.

The product should not be stored above 60°C, exposed to hot sun or freezing conditions.

## Typical Characteristics

	Unit	Test Method	MP-S 32	MP-S 46	MP-S 68	MP-S 100	MP-S 170	MP-S 220
ISO Grade			32	46	68	100	170	220
Density @ 15°C	kg/m <sup>3</sup>	ASTM D1298	980	965	970	970	970	980
Viscosity @ 40°C	mm <sup>2</sup> s <sup>-1</sup>	ASTM D445	32	46	68	100	170	210
Viscosity @ 100°C	mm <sup>2</sup> s <sup>-1</sup>	ASTM D445	5.7	6.7	8.7	12	16	19
Flash Point, PMCC,	°C	ASTM D93	210	210	210	220	220	220
Pour Point	°C	ASTM D97	-50	-50	-42	-30	-30	-30
Water Content	Ppm	ASTM D1744	<100	<100	<100	<100	<100	<100
Total Acid Number (TAN)	mgKOH/g	ASTM D974	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Critical Solution Temp (10% oil in R134a)	°C	-	-50	-25	-35	-10	-25	-25

The above figures are typical of those obtained with normal production tolerances, and do not constitute a specification. Note 1 mm<sup>2</sup> s<sup>-1</sup> = 1 cSt.

## General Advice

Further information on all BP Marine lubricants is available from any BP Marine office or from:

BP Marine [www.bpmarine.com](http://www.bpmarine.com)

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