

# AGIP BETULA S



The **AGIP BETULA S** series are synthetic oils with superior characteristics which make them suitable for lubrication of refrigeration equipment and other machinery operating at very low temperatures.

## CHARACTERISTICS (TYPICAL FIGURES)

AGIP BETULA S		32	46	68	100
Viscosity at 40°C	mm <sup>2</sup> /s	29.4	43.9	63.3	94.8
Viscosity at 100°C	mm <sup>2</sup> /s	5,1	6,6	8,4	11,2
Viscosity Index	-	98	102	103	104
Flash Point COC	°C	206	212	226	230
Pour Point	°C	-54	-51	- 48	-45
Flock Point	°C	<-60	<-60	<-60	<-60
Mass density at 15°C	kg/l	0.841	0.845	0.847	0.851

## PROPERTIES AND PERFORMANCE

**AGIP BETULA S** products have the following properties which guarantee trouble-free operation of refrigeration compressors in which they are used:

- Low pour points and flock points combined with good high temperature these performance make **AGIP BETULA S** suitable for lubrication of refrigeration compressors, avoiding problems which can occur due to entrainment of compressor oil by the refrigerant.
- High chemical stability ensures that **AGIP BETULA S** oils do not react with refrigerants and even when mixed with them do not attack metals and seals, as demonstrated by good results in the Philipp test.
- Low carbon residue reduces tendency to form deposits on the hot surfaces of compressor valves.
- High dielectric strength avoids difficulties in those compressors where the lubricant comes into contact with the windings of electric motors.
- Good lubricating properties overcome wear problems in the moving parts of machinery in which **BETULA S** oils are used.
- The high viscosity index of all grades minimizes changes in viscosity throughout the wide range of operating temperatures of refrigeration compressors.

## APPLICATIONS

**AGIP BETULA S** oils are intended for lubrication of refrigeration compressors (reciprocating, rotary-screw and vane) of the hermetic domestic type, open and semi-sealed industrial units for refrigeration, or heat pump systems using all types of refrigerant (ammonia, Freon 12, Freon 22 etc.).

They may also be used in other equipment and machinery operating at very low temperatures.

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## SPECIFICATIONS

AGIP BETULA S products meet the test requirements of the following specifications:

- DIN 51303 KA
- DIN 51503 KC
- IRE
- MM-O-2008 type II (NATO O-283)
- MM-O-2008 type IV (NATO O-290)
- SABROE
- VV-L-825b type II (NATO O-283)
- VV-L-825b type IV (NATO O-290)

AGIP BETULA S are approved from the following manufacturers:

- ASPERA
- SULZER (ISO 100)
- ZANUSSI ELECTROLUX