Oils for refrigerant R22

BITZER compact screw compressors for R22 are charged with a high-quality complex ester oil. It significantly exceeds the requirements of DIN 51503, Part 1, for refrigeration compressor oils with respect to water content and total acid number (TAN). It mixes well with R22 and is therefore especially suitable for operation with this substance.

Charakterisation and application range

B320SH	
oil type	complex ester
Designation on compressor	– –
application range	
condensing temperature	CSH: .. 60 °C CSW: .. 50 °C
evaporation temperature	+12,5 .. -15 °C
discharge gas temperature	60 .. max. 120 °C

BITZER oil B320SH for refrigerant R22 in compact screw compressors. For application limits see also BITZER SOFTWARE.

Material safety data sheets

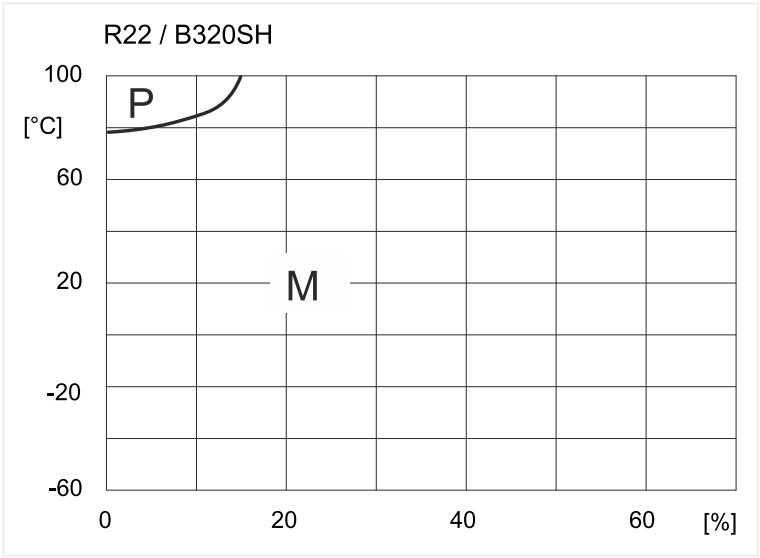
Apart from this document, please observe the material safety data sheet (MSDS) for the respective oil. It contains information on toxicity, handling, personal protective equipment and disposal of the oil. Material safety data sheets for all BITZER oils are available on request.

Technical data

Technical data B320SH	
Density at 15°C	1.015 g/ml
Flashpoint	258 °C
Pour point	-42 °C
Kinematic viscosity	
at 40°C	310 cSt
at 100°C	32 cSt
Specific heat capacity	
at 40°C	1.68 kJ/kg*K
at 100°C	1.85 kJ/kg*K
Thermal conductivity	
at 40°C	0.12 W/m*K
at 100°C	0.12 W/m*K

Technical data of oil B320SH for refrigerant R22

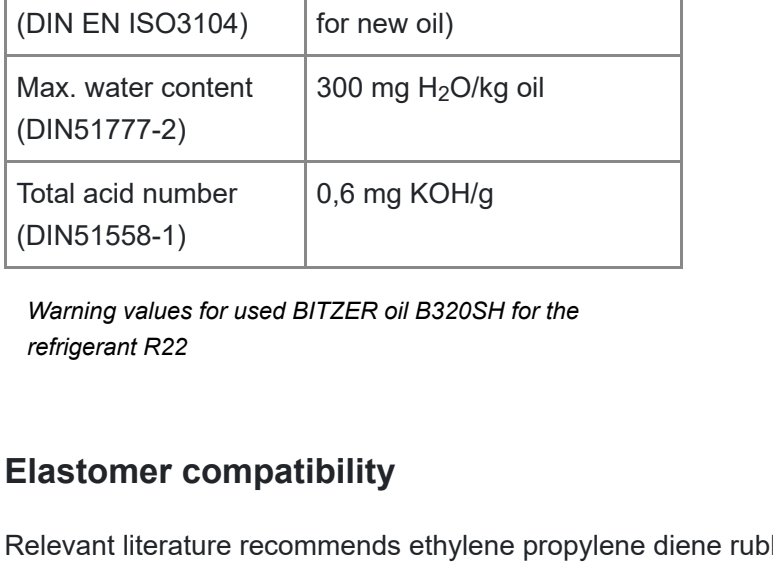
Miscibility gaps B320SH



Miscibility gaps for oil B320SH: Limit temperature depending on oil content (mass % of oil in oil refrigerant blend).
M: Range of complete miscibility.
P: Phase separation range (miscibility gap).

Refrigerant solubility in B320SH

The following diagram can be used to read off the refrigerant content in the lubricant depending on refrigerant pressure and oil temperature.



Oil B320SH: Refrigerant pressure depending on oil temperature and refrigerant content (mass % of refrigerant in oil-refrigerant blend).

Warning values for used oil

B320SH is categorized as group KC according to DIN51503, Part 1. To determine the used condition of the oil, e.g. with respect to water content or total acid number (TAN), the reference values of DIN 51503, Part 2, apply.

Warning values B320SH	
Kinematic viscosity at 40°C (DIN EN ISO3104)	outside of 264 .. 356 cSt (that is ± 15% of the value for new oil)
Max. water content (DIN51777-2)	300 mg H_2O/kg oil
Total acid number (DIN51558-1)	0,6 mg KOH/g

Warning values for used BITZER oil B320SH for the refrigerant R22

Elastomer compatibility

Relevant literature recommends ethylene propylene diene rubber as seal material for complex ester with refrigerant R22.

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