

Datasheet AS RS20



AS RS20 bearing materials is reinforced weave polymer material special developed for high loads and smooth running. The material contains an ideal concentration of graphite which gives the very good result in areas were reduced friction and wear is required. AS RS20 has good wear resistance and is suitable for operating under dry, wet and lubricated circumstances. AS RS 20 has a low coefficient of friction, can withstand edge loading and has virtually no swell in water.

AS RS20 is produced under approval of ISO 9001 for all manufacturing operations and tested in laboratories.

AS RS20 is available from 16 mm inside diameter tube up to 2000 mm outside diameter. Also bigger sizes are available. It can made of sheet from 2.5 mm up to 200 mm thickness.

AS RS20 is applied in offshore, dredging, marine, deck equipment, machines, bridges, sluices, hydraulic cylinders and other equipment.

Material structure: Synthetic fiber-reinforced polyester composite with friction modifier graphite additions.

Features:

- High wear resistance.
- Near zero moisture absorption.
- Impact and shock resistant.
- Self-lubricating.
- High load capacity.

Operating conditions: Dry, grease lubricated, water-lubricated, low maintenance.

Availability: Tubes, cylindrical bushes, flange bushes, plates, machined parts.

Typical usage: Marine, petroleum and chemical plant, railway, agriculture, hydraulics, water/sewage treatment.

- (1): Hardness rockwell: HRM.
(2): Hardness rockwell: HRC.
(3): Coefficient of friction dynamic: oil/grease.

Material	
Material	Composite

Availability	Unit	Value
Min. inside diameter	mm	16
Max. outside diameter	mm	2000 (bigger diameter possible made of arced segments)
Length standard	mm	500 (longer on request)

Physical Properties	Test Standard	Unit	Value
Density	ASTM D792	g/cm ³	1.24
Max. swell in water at 20 °C	ASTM D570	%	0.1

Mechanical Properties	Test Standard	Unit	Value
Compressive strength static	ASTM D695	MPa	330
Compressive strength dynamic	ASTM D695	MPa	85
Module of elasticity	ASTM D695	MPa	2300
Tensile strength	ASTM D3410	MPa	60
Shear strength	ASTM D3410	MPa	80
Impact strength	ASTM D256	kJ/m ²	50
Hardness rockwell	ASTM D785	HRM/HRC	98 ⁽¹⁾

Thermal Properties	Test Standard	Unit	Value
Thermal expansion	ASTM D696	*10 ⁻⁵ / °C	7
Min. working temperature		°C	-40
Max. working temperature		°C	120
Intermittent working temperature		°C	140

Friction Properties	Test Standard	Unit	Value
Coefficient of friction dynamic	Pin-on-ring	Dry against steel	0.1-0.14
Max. sliding speed	Pin-on-ring	m/s	2
Max. pv load dry	Pin-on-ring	MPa*m/s	0.2
Max. pv load oil lubricated	Pin-on-ring	MPa*m/s	0.35
Max. pv load regular greased	Pin-on-ring	MPa*m/s	0.6
Wear factor	Pin-on-ring	*10 ⁻⁹ m ² /N	-