M SEALS **TFEP-B85**

Tetrafluoroethylene/Propylene copolymer (TFE/P)

MATERIAL DATA SHEET (Version 6.0 – 05.2022)

- Part of Diploma PLC


High Temperature


Oil & Gas use


Chemical Resistance

Description

TFEP-B85 is a Bisphenol cured Tetrafluoroethylene/Propylene Copolymer, commonly referred to as TFE/P, FEPM or Aflas™*.

This material has an excellent resistance to the harshest chemicals seen in the Oil & Gas industry, including acids, hot water/steam, HFA, HFB, HFC and HFD hydraulic fluids, as well as sour oils/gases (H_2S) and heavily formulated oils with amine additives. Care should be taken when utilising this material in low temperature environments due to loss of flexibility and we do not recommend its use in aromatic fuels, chlorinated hydrocarbons, chlorine based solvents, ketones and organic refrigerants.

Physical Properties

Property	Test method	Unit	Typical Value
Colour			Black
Density	ISO 1183-1	g/cm^3	1.76
Hardness	ISO 7619-1	Shore A	86(+/-5)
Tensile strength	DIN 53504	N/mm^2	12.1
Modulus 100%	DIN 53504	N/mm^2	10.6
Elongation at break	DIN 53504	%	140
Tear Strength	ISO 34-1 B	N/mm	19.4
Rebound resilience	DIN 53512	%	9
Compression set (25% Strain 24 Hours @ 70°C)	ISO 815-1	%	21.7
Compression set (25% Strain 24 Hours @ 100°C)	ISO 815-1	%	21
Compression set (25% Strain 24 Hours @ 175°C)	ISO 815-1	%	36.8
Minimum service temperature		°C	-10
Maximum service temperature		°C	+210
Maximum service temperature - short term		°C	+230
Maximum service temperature in Steam		°C	+170

Main Characteristics

- Excellent chemical resistance
- Excellent high temperature resistance
- Excellent hot water / steam resistance
- Good abrasion resistance
- Good physical properties

Typical Products

- Energised U-Seals
- T-Seals
- Static Seals & O-Rings
- Scraper / Wiper seals
- Packers / bespoke parts

*AFLAS is a reg. trademark of Asahi Glass Co. Japan.

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