

M SEALS TFEP-B85

Tetrafluoroethylene/Propylene copolymer (TFE/P)

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



High Temperature



Oil & Gas use



Chemical Resistance

Description

TFEP-B85 is a Bisphenol cured Tetrafluoroethylene/Propylene Copolymer, commonly referred to as TFE/P, FEP 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 (H₂S) 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.

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: sales.esd@m-seals.co.uk . Web: www.m-seals.com

M Seals believes that the information above is an accurate description of the typical characteristics and/or uses of the product or products, however M Seals makes no warranty, expressed or implied, that parts manufactured from this / and/or any other material will perform satisfactorily in the customers application. It is the customers responsibility to thoroughly test products in their specific application to determine performance, efficiency and safety for each end-use product, device or application. The information and data contained herein are based on standard test pieces according to the corresponding ISO, DIN & ASTM standards and cannot be directly related to finished seals, gaskets or other sealing products and should be used only as a general guide.