

Turcite®

T51

SPECIALLY ENGINEERED POLYMER FOR DEMANDING APPLICATIONS

A high grade composition of virgin PTFE compounded with carbon and graphite.

THERMOPLASTIC BASE

PTFE

ADDITIONAL CODES

T51A,T51EC,T51N

COLOUR

Black

*) The Colour of the material may have variations in shading.

MATERIAL REFERENCE

None

PROJECTED SERVICE TEMPERATURES

Minimum* -200°C

Maximum* +260°C

*) Maximum and minimum service temperature are given only as indication and can vary strongly on product shape and application conditions.

TYPICAL APPLICATIONS

For hydraulic and pneumatic

For linear motion in lubricating and non-lubricating fluids

Rotary service in lubricating fluid

Good chemical resistance

Not for electrical conducting fluids

INDUSTRY SPECIFICATION / ASTM CALLOUTS

ASTM callouts not specified.

1*) Material is approved according to ASTM testing

2*) Material was tested independent of ASTM methods.

Results are only to be considered as similar.



PROPERTIES SPECIFICATION

Test Criteria*	Test Conditions	Unit	Test Specification	Requirements
Density	+23°C	g/cm ³	ASTM D 792	2.07 +0.03/-0.02
Ball Indention Hardness	+23°C	MPa	ISO 2039-1	min. 34
Hardness	+23°C	Shore D	ASTM D 2240	N/A
Tensile Stress @ Break	+23°C	MPa	ASTM D 4894	min. 12.0
Elongation @ Break	+23°C	%	ASTM D 4894	min. 100

TYPICAL ENGINEERING PROPERTIES

Test Criteria*	Test Conditions	Unit	Test Specification	Typical Value**
Density	+23°C	g/cm ³	ASTM D 792	2.07
Ball Indention Hardness	+23°C	MPa	ISO 2039-1	45
Hardness	+23°C	Shore D	ASTM D 2240	66

Mechanical Properties				
Tensile Stress @ Break	+23°C	MPa	ASTM D 4894	19.0
Modulus 100%	+23°C	N/A	ASTM D 4894	N/A
Elongation @ Break	+23°C	%	ASTM D 4894	170
Deformation under Load	+23°C 24H - 13.8MPa	%	ASTM D 621	4.10
Creep	+23°C 24H - 13.8MPa - 1.5H	%	ASTM D 621	2.60

Thermal Properties				
Coefficient of Linear Expansion	+25°C - +125°C	mm/mm/°K	ASTM E 831	1E-4

Miscellaneous Properties				
Surface Resistivity	+23°C	Ohm	DIN 53 482	2E+5
Volume Resistivity	+23°C	Ohm x cm	DIN 53 482	4E+4

* All tests were carried out on standard samples. Values can vary on final product.

** Typical values are given only as indication and actual results may vary depending on material batch.

Time within () means the test has been performed after that duration. For e.g. (25H) means test was performed after 25H.

N/A: Value is not available.