Dr. Dietrich Müller GmbH
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Tecfilm® PA TC 00190

General Description: A semi-crystalline, white engineering thermoplastic, which is very similar to Tecfilm® PA TC 00192. Tecfilm® PA TC 00190 is comparable in many areas with Tecfilm® PA TC 00192. Its melt viscosity is not quite as low as of Tecfilm® PA TC 00192, therefore Tecfilm® PA TC 00190 is a little bit easier to process and is often preferred for forming processes. Compared to Tecfilm® PA TC 00192, Tecfilm® PA TC 00190 has slightly higher impact strength, its strength in general and its rigidity is somewhat lower. In addition, the water absorption capacity of Tecfilm® PA TC 00190 is higher (the highest of all Nylons). Tecfilm® PA TC 00190 can be "monomer-cast", a process that is generally just called "casting". This means that the material is polymerized directly in a form of a semi-finished formed part. This allows the manufacture of thick sections without emptying the casting moulds and produces a product with a slightly different combination of characteristics: a little stronger and more rigid, slightly reduced elasticity and impact strength.

Delivery forms: Tecfilm® PA TC 00192 can be delivered on roll, as tape, customized cut and die-cut part, as well as self-adhesive. Other delivery forms upon customer request.

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Properties	Test Method	Unit	Value
Refractive Index	-	-	1.53
Density	-	g cm^{-3}	1.13
Inflammability	-	-	HB
Minimum Oxygen Content	-	%	25
Radiation Resistance	-	-	satisfactory
Water Absorption – Same Weight Ratio	-	%	>8
Resistance to Ultraviolet Light - Over 24 Hours	-	%	27
Resistance to Ultraviolet Light	-	-	poor
Abrasion Resistance	ASTM D1044	mg/1000 Cycles	5
Modulus of Elasticity at Break	-	GPa	2.6 – 3.0
Hardness - Rockwell	-	-	M82
Izod Notched Impact Strength	-	J m^{-1}	30-350
Poisson - Ratio	-	-	0.39
Friction Coefficient	-	-	0.2-0.3
Elongation	-	%	150-300
Tensile Strength	-	MPa	78
Dissipation Factor at 1 kHz	-	-	0.02
Dielectric Strength	-	kV mm^{-1}	25
Dielectric Constant at 1 MHz	-	-	3.6
Specific Surface Resistance	-	Ohm/sq	5 x 10^{10}
Alcohol	-	-	good
Aromatic Hydrocarbons	-	-	good
Grease and Oil	-	-	good
Halogen	-	-	poor
Specific Volume Resistance	-	Ohmcm	5 x 10^{12}
Heat-deflection Temperature - 0.45 MPa	-	-	200 °C
Heat-deflection Temperature - 1.8 MPa	-	-	80 °C
Linear Thermal Expansion Coefficient	-	-	95 x 10^{-6} K^{-1}
Max. Continuous Use Temperature	-	°C	180-160
Min. Continuous Use Temperature	-	°C	-40
Specific Heat	-	J K^{-1} kg^{-1}	1700
Thermal Conductivity at 23 ° C	-	W m^{-1} K^{-1}	0.24 – 0.28
Halogenerated Hydrocarbons	-	-	good-poor
Ketone	-	-	good
Alkalis	-	-	good-average
Acids - concentrated	-	-	poor
Acids - diluted	-	-	poor

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Trademark Information: Tecfilm® is a registered mark of the company Dr. Dietrich Müller GmbH, Germany.

Please note: The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself.