

TECAFORM AH ELS black - Stock Shapes (rods, plates, tubes)

Chemical Designation

POM-C (Polyacetal (Copolymer))

Colour

black opaque

Density

1.41 g/cm³

Fillers

conductive carbon black

Main features

- electrically conductive
- high strength
- difficult to bond
- good machinability
- good chemical resistance
- high toughness
- good wear properties
- good UV and weather resistance

Target Industries

- chemical technology
- electronics
- mechanical engineering
- automotive industry

Mechanical properties

parameter	value	unit	norm	comment
Tensile strength	50mm/min	42	MPa	DIN EN ISO 527-2
Modulus of elasticity (tensile test)	1mm/min	1800	MPa	DIN EN ISO 527-2
Tensile strength at yield	50mm/min	42	MPa	DIN EN ISO 527-2
Elongation at yield (tensile test)	50mm/min	11	%	DIN EN ISO 527-2
Elongation at break (tensile test)	50mm/min	11	%	DIN EN ISO 527-2
Flexural strength	2mm/min, 10 N	56	MPa	DIN EN ISO 178
Modulus of elasticity (flexural test)	2mm/min, 10 N	1500	MPa	DIN EN ISO 178
Compression strength	1% / 2% / 5% 5mm/min, 10 N	16/25/45	MPa	EN ISO 604
Compression modulus	5mm/min, 10 N	1500	MPa	EN ISO 604
Impact strength (Charpy)	max. 7,5J	74	kJ/m ²	DIN EN ISO 179-1eU
Ball indentation hardness		96	MPa	ISO 2039-1

Thermal properties

parameter	value	unit	norm	comment
Glass transition temperature	-60	°C	DIN EN ISO 11357	1)
Melting temperature	169	°C	DIN EN ISO 11357	
Service temperature short term	140	°C		2)
Service temperature long term	100	°C		
Thermal expansion (CLTE)	23-60°C, long.	13	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Thermal expansion (CLTE)	23-100°C, long.	14	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Specific heat	1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity	0.46	W/(K*m)	ISO 22007-4:2008	
Relative temperature index (RTI)	Impact	90	°C	UL 746B

Electrical properties

parameter	value	unit	norm	comment
surface resistivity	Conductive rubber, 23°C, 12% r.h.	10 ² - 10 ⁴	Ω	DIN EN 61340-2-3
volume resistivity	Conductive rubber, 23°C, 12% r.h.	10 ³ - 10 ⁵	Ω*cm	DIN EN 61340-2-3

Other properties

parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.05 / 0.2	%	DIN EN ISO 62
Resistance to hot water/ bases	(+)	-	-	1)
Resistance to weathering	(+)	-	-	2)
Flammability (UL94)	corresponding to	HB	DIN IEC 60695-11-10:	3)

(1) Ø ca. 50mm, h=13mm
(2) (+) limited resistance
(3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.

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