SUPPLY SERVICES

performance engineering products

TECAFORM AH natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
white opaque

Density
1.41 g/cm^3

Main features
- high strength
- resistent to cleaning agents
- stiff
- high toughness
- very good electrical insulation
- good machinability
- good slide and wear properties
- difficult to bond

Target Industries
- mechanical engineering
- automotive industry
- aircraft and aerospace technology
- electronics
- food technology
- oil and gas industry
- medical technology

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	67	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	67	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	32	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	91	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	20/35/68	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2300	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	8	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		165	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		166	°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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*		*comment*
surface resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness (2) Specimen in 1mm thickness
volume resistivity	Silver electrode, 23°C, 12% r.h.	10^{13}	Ω*cm	DIN IEC 60093		
Dielectric strength	23°C, 50% r.h.	49	kV/mm	ISO 60243-1	2)	
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112		

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

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

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
black opaque

Density
1.41 g/cm^3

Main features
- high stiffness
- high strength
- high toughness
- good chemical resistance
- difficult to bond
- good slide and wear properties
- good machinability

Target Industries
- mechanical engineering
- automotive industry
- aircraft and aerospace technology
- food technology
- oil and gas industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	67	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	67	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	32	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	91	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	20/35/68	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2300	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	150	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	6	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		165	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		166	°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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness (2) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise. (3) Specimen in 1mm thickness
volume resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω*cm	DIN IEC 60093	2)	
Dielectric strength	23°C, 50% r.h.	38	kV/mm	ISO 60243-1	3)	
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		(+)				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

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TECAFORM AH blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue opaque

Density
1.41 g/cm^3

Main features
- high strength
- high toughness
- good chemical resistance
- good machinability
- very good electrical insulation
- easy to polish
- difficult to bond
- good slide and wear properties

Target Industries
- mechanical engineering
- electronics
- food technology
- automotive industry
- medical technology

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0,5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b.= not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	67	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	67	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	32	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	91	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% 5mm/min, 10 N	20 / 35	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2300	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		166	°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		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness (2) Specimen in 20mm thickness
volume resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω*cm	DIN IEC 60093	2)	

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

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TECAFORM AH UD blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue opaque

Density
1.68 g/cm^3

Fillers
detectable filler

Main features
- metal detectable
- x-ray opaque
- food grade blue
- good mechanical properties
- good machinability

Target Industries
- food processing
- food engineering
- engineering for beverage filling systems
- packaging and paper machinery
- conveyor technology
- pharmaceutical industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	3300	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	60	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	60	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	13	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	13	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	91	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3200	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	22/37/71	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	1600	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	40	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	5	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		166	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		167	°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.	11	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	12	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0,17/0,34	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH ID blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue opaque

Density
1.49 g/cm^3

Fillers
detectable filler

Main features
- good slide and wear properties
- high stiffness
- good machinability
- high strength
- good chemical resistance
- detectable via metal detector
- difficult to bond
- high toughness

Target Industries
- food technology
- mechanical engineering

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	3200	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	68	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	68	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	8	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	10	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	100	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3100	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	17/31/69	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2400	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	59	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	4	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		174	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		> 10^{13}	Ω	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH ID grey - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
grey opaque

Density
1.49 g/cm^3

Fillers
detectable filler

Main features
- detectable via metal detector
- high stiffness
- good slide and wear properties
- good machinability
- high strength
- good chemical resistance
- difficult to bond
- high toughness

Target Industries
- food technology
- mechanical engineering

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	3200	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	68	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	68	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	8	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	10	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	100	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3100	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	17/31/69	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2400	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	59	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	11	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		174	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		> 10^{13}	Ω	DIN IEC 60093		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

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

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
black opaque

Density
1.41 g/cm^3

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
Modulus of elasticity (tensile test)	1mm/min	1800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	42	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	42	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	11	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	11	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	56	MPa	DIN EN ISO 178	2)	
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	3)	
Compression modulus	5mm/min, 10 N	1500	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	74	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		96	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		

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	1)	(1) Specimen in 20 mm thickness
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	1)	(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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		(+)				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

Ensinger

TECAFORM AH SD natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
ivory opaque

Density
1.35 g/cm^3

Fillers
antistatic agent

Main features
- antistatic
- soot-free
- high strength
- good wear properties
- good chemical resistance
- high stiffness
- difficult to bond
- high toughness

Target Industries
- semiconductor technology
- chemical technology
- electronics
- food technology
- mechanical engineering

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	1300	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	39	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	39	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	23	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	23	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	46	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	1200	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	12/19/34	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	1100	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		74	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		165	°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.	16	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	17	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.6	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.30	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity	Silver electrode, 23°C, 50% r.h.	10^9-10^{11}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness (2) Specimen in 1mm thickness
volume resistivity	Silver electrode, 23°C, 50% r.h.	10^9	Ω*cm	DIN IEC 60093		
Dielectric strength	23°C, 50% r.h.	5	kV/mm	ISO 60243-1	2)	
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.9 / 1.8	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH GF25 natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
white opaque

Density
1.59 g/cm^3

Fillers
glass fibres

Main features
- high strength
- good wear properties
- good chemical resistance
- electrically insulating
- very high stiffness
- difficult to bond

Target Industries
- electronics
- mechanical engineering
- automotive industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	4200	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	51	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	51	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	12	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	88	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	4100	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	23/39/74	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	3600	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	36	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		180	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		170	°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.	8	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	8	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.2	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.47	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		10^{14}	Ω	DIN IEC 60093	
volume resistivity		10^{14}	Ω*cm	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.07 / 0.2	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH TF10 blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue

Density
1.46 g/cm^3

Fillers
10% PTFE

Main features
- resistent to cleaning agents
- high toughness
- very good electrical insulation
- good machinability
- good slide and wear properties
- difficult to bond

Target Industries
- mechanical engineering
- automotive industry
- electronics
- food technology
- medical technology

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2900	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	57	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	57	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	11	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	15	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	82	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2700	MPa	DIN EN ISO 178		
Compression strength	1% / 2% 5mm/min, 10 N	15 / 30	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2300	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	56	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 2J	4	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		141	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		168	°C	DIN EN ISO 11357		
Service temperature	short term	140	°C		2)	
Service temperature	long term	100	°C			

Electrical properties	*parameter*	*value*	*unit*	*norm*		*comment*
surface resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness
volume resistivity	Silver electrode, 23°C, 12% r.h.	10^{13}	Ω*cm	DIN IEC 60093		

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH LA blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue grey opaque

Density
1.36 g/cm^3

Fillers
solid lubricant

Main features
- good slide and wear properties
- high stiffness
- good chemical resistance
- high toughness
- electrically insulating
- difficult to bond
- good machinability
- high strength

Target Industries
- mechanical engineering
- electronics
- automotive industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2100	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	48	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	48	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	9	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	70	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2000	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	16/27/54	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	1800	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	27	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		120	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		166	°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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		10^{14}	Ω	DIN IEC 60093	
volume resistivity		10^{14}	Ω*cm	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH LM white - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
white opaque

Density
1.41 g/cm^3

Main features
- laser-markable
- resistent to cleaning agents
- high strength
- high toughness
- good machinability
- difficult to bond
- good slide and wear properties

Target Industries
- food engineering
- conveyor technology
- mechanical engineering
- precision engineering
- automotive industry
- electrical engineering
- home appliances
- medical technology

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2700	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) For Charpy test: support span 64mm, norm specimen. (4) Specimen in 4mm thickness
Tensile strength	50mm/min	60	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	60	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	11	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	32	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	81	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2400	MPa	DIN EN ISO 178		
Impact strength (Charpy)	max. 7,5J	110	kJ/m^2	DIN EN ISO 179-1eU	3)	
Notched impact strength (Charpy)	max. 7,5J	6	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		140	MPa	ISO 2039-1	4)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		168	°C	DIN EN ISO 11357		
Service temperature	short term	140	°C		2)	
Service temperature	long term	100	°C			

Electrical properties	parameter	value	unit	norm		comment

Other properties	parameter	value	unit	norm		comment
Resistance to hot water/ bases		(+)		-	1)	(1) (+) limited resistance (2) - poor 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.
Resistance to weathering		-		-	2)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

Ensinger

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

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
black opaque

Density
1.41 g/cm^3

Main features
- high stiffness
- good chemical resistance
- high toughness
- good machinability
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm	comment
surface resistivity		> 10^{12}	Ω	DIN IEC 60093	

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
blue opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- biocompatible
- good chemical resistance
- good machinability
- high stiffness
- high toughness
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	120	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT brown - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
brown opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- high stiffness
- good chemical resistance
- good machinability
- high toughness
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	150	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		10^{14}	Ω	DIN IEC 60093		
volume resistivity		10^{14}	Ω*cm	DIN IEC 60093		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT green - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
green opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- good chemical resistance
- high stiffness
- good machinability
- high toughness
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		> 10^{12}	Ω	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT grey - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
grey opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- biocompatible
- good chemical resistance
- high stiffness
- good machinability
- high toughness
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		> 10^{12}	Ω	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT red - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
red opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- biocompatible
- good chemical resistance
- high stiffness
- high toughness
- good machinability
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		> 10^{12}	Ω	DIN IEC 60093		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AH MT yellow - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
yellow opaque

Density
1.41 g/cm^3

Main features
- electrically insulating
- biocompatible
- good chemical resistance
- good machinability
- high stiffness
- high toughness
- difficult to bond
- high strength

Target Industries
- medical technology
- food technology
- pharmaceutical industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	69	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	70	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	15	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	30	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	94	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	18/32/65	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2200	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		158	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
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		1.4	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		> 10^{12}	Ω	DIN IEC 60093	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) 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.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Ensinger

TECAFORM AD natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-H (Polyacetal (Homopolymer))

Colour
white opaque

Density
1.43 g/cm^3

Main features
- good slide and wear properties
- high strength
- electrically insulating
- good chemical resistance
- difficult to bond
- good machinability
- easy to polish
- not hot water resistant over 60°C

Target Industries
- mechanical engineering
- aircraft and aerospace technology
- electronics
- food technology
- automotive industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	3400	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	79	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	79	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	37	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	45	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	106	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	19/33/69	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2700	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	15	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		185	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		182	°C	DIN EN ISO 11357		
Service temperature	short term	150	°C		2)	
Service temperature	long term	110	°C			
Thermal expansion (CLTE)	23-60°C, long.	12	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	13	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.43	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10^{14}	Ω	DIN IEC 60093	

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) - poor 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.
Resistance to hot water/ bases		-		-	2)	
Resistance to weathering		-				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

Ensinger

TECAFORM AD black - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-H (Polyacetal (Homopolymer))

Colour
black opaque

Density
1.43 g/cm^3

Main features
- high strength
- difficult to bond
- good slide and wear properties
- good machinability
- not hot water resistant over 60°C
- good chemical resistance
- easy to polish

Target Industries
- mechanical engineering
- aircraft and aerospace technology
- electronics
- oil and gas industry
- automotive industry

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	3600	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	80	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	80	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	32	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	43	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	106	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3600	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	22/38/72	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2800	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	14	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		185	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		182	°C	DIN EN ISO 11357		
Service temperature	short term	150	°C		2)	
Service temperature	long term	110	°C			
Thermal expansion (CLTE)	23-60°C, long.	11	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	11	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.43	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω	DIN IEC 60093	1)	(1) Specimen in 20mm thickness (2) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise. (3) Specimen in 1mm thickness
volume resistivity	Silver electrode, 23°C, 12% r.h.	10^{14}	Ω*cm	DIN IEC 60093	2)	
Dielectric strength	23°C, 50% r.h.	38	kV/mm	ISO 60243-1	3)	
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) - poor 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.
Resistance to hot water/ bases		-		-	2)	
Resistance to weathering		-				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

Ensinger

TECAFORM AD AF natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-H (Polyacetal (Homopolymer))

Colour
dark brown opaque

Density
1.49 g/cm^3

Fillers
PTFE

Main features
- good slide and wear properties
- high strength
- electrically insulating
- high toughness
- good machinability
- good chemical resistance
- difficult to bond
- not hot water resistant over 60°C

Target Industries
- mechanical engineering
- automotive industry
- aircraft and aerospace technology
- electronics
- food technology

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)	1mm/min	3000	MPa	DIN EN ISO 527-2	1)	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Tensile strength	50mm/min	53	MPa	DIN EN ISO 527-2		
Tensile strength at yield	50mm/min	53	MPa	DIN EN ISO 527-2		
Elongation at yield	50mm/min	8	%	DIN EN ISO 527-2		
Elongation at break	50mm/min	8	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	85	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3000	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	19/33/67	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2400	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	25	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		166	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		179	°C	DIN EN ISO 11357		
Heat distortion temperature	HDT, Method A	141	°C	ISO-R 75 Method A		
Service temperature	short term	150	°C		2)	
Service temperature	long term	110	°C			
Thermal expansion (CLTE)	23-60°C, long.	12	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	13	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		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		10^{14}	Ω	DIN IEC 60093		

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) - poor 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.
Resistance to hot water/ bases		-		-	2)	
Resistance to weathering		-				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

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