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ABS

An amorphous engineering plastic that is tough, hard and rigid.

ABS's main characteristics are that it is:

- Strong and rigid
- Tough
- Easily machined
- Easily bonded and welded
- Resistant to most alkalis and weak acids
- High heat distortion temperature
- Very good electrical insulator
- Excellent formability
- Relatively low water absorption

The preferred fields for the use of ABS are, mechanical engineering, pipes and fittings in drains, waste and vent tubes, telecommunications industry, business prototyping and modeling, packaging machinery, and dispensing machinery.

The most popular applications for this product are:

- Pipes and fittings
- Textile spools
- Handles
- Domestic appliances
- Radio and stereo equipment
- Insulators
- Prototype models
- Trays



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TECHNICAL INFORMATION

Information to be used as a guide only. It corresponds with our current knowledge and indicates possible applications. We cannot guarantee suitability for a specific application. Unless otherwise stated these values represent averages taken from injection moulded samples.

Properties	Unit	Test Method DIN ASTM	Result
MECHANICAL	-	-	-
Density	g/cm ³	534.79	1.06
Tensile strength at yield	MPa	534.55	45
Tensile strength at break	MPa	534.55	-
Elongation at Break	%	534.55	20
Modulus of elasticity in tension	MPa	534.57	2400
Modulus of elasticity in flexure	MPa	534.57	-
Ball indentation hardness	MPa	534.56	90
Impact strength (Charpy)	KJ/m ²	534.53	no break
Creep rupture strength after 1000 hours with static load	MPa	-	28
Time yield limit for 1% elongation after 1000 hours	MPa	-	17
Coefficient of friction against hardened and ground steel p=0,05 N/mm ² , v=0,6 m/s	-	-	0.5
Wear conditions as above	µm/km	-	8.4
THERMAL	-	-	-
Crystalline melting point	°C	537.36	-
Glass transition temperature	°C	537.36	85 - 100
Heat distortion temperature method A	°C	ISO 75	82-104
Heat distortion temperature method B	°C	ISO 75	96-108
Max. service temperature short term	°C	-	100
Max. service temperature long term	°C	-	85
Coefficient of thermal conductivity	W/(m K)	-	0.17
Specific heat	J/(g K)	-	1.2
Coefficient of thermal expansion	10 ⁻⁵ /K	-	8
ELECTRICAL	-	-	-
Dielectric constant at 10 (5) Hz	-	534.83	3.3
Dielectric loss factor at 10(5) Hz	-	534.83	0.015
Specific Volume Resistance	Ωcm	534.82	>10 (15)
Surface Resistance	Ω	534.82	-
Dielectric strength 1mm	kV/mm	534.81	>22
Tracking resistance	-	534.80	KA3b
MISCELLANEOUS	-	-	-
Moisture Absorption: Equilibrium in standard atmosphere (23°C / 50% relative humidity)	%	537.14	0.3
Water absorption at saturation at 23°C	%	534.95	0.7
Resistance to hot water, washing soda	-	-	not resistant
Flamability	-	UL 94	HB
Resistance to weathering	-	-	not resistant