

TECARAN ABS

Chemical Designation: Acrylonitrile butadiene styrene

DIN Abbreviation: ABS

Colour, Filler: Grey or black

TECARAN ABS is an amorphous engineering plastic that is tough, hard and rigid

Main characteristics:

- Strong and rigid
- Tough
- Easily machined
- Easily bonded and welded
- Resistant to most alkalis and weak acids
- Low density
- Very good electrical insulation
- Excellent formability
- Relatively low water absorption

Preferred fields: Mechanical engineering, automotive engineering, construction, domestic appliances, telecommunications industry, business prototyping and modelling, packaging machinery, dispensing machinery.

Applications:

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

Ensinger Ltd
Wilfried Way
Tonyrefail
Mid Glam CF39 8JQ

Tel: 01443 678400
Fax: 01443 675777
Web: www.ensinger.ltd.uk
Email: sales@ensinger.ltd.uk

TECARAN

The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN ASTM	
Mechanical			
Density	g/cm ³	53 479	1.06
Tensile strength at yield	MPa	53 455	50
Tensile strength at break	MPa	53 455	
Elongation at break	%	53 455	
Modulus of elasticity in tension	MPa	53 457	2400
Modulus of elasticity in flexure	MPa	53 457	
Ball indentation hardness	MPa	53 456	85
Impact strength	kJ/m ²	53 453	220
Creep rupture strength after 1000 hrs with static load	MPa		28
Time yield limit for 1% elongation after 1000 hrs.	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	53 736	
Glass transition temperature	°C	53 736	115
Heat distortion temperature Method A Method B	°C °C	ISO 75 ISO 75	82 - 104 96 - 108

Properties	Unit	Test method DIN ASTM	
Thermal			
Max. service temperature short term long term	°C °C		100 75
Coefficient of thermal conductivity	W/(m · K)		0.17
Specific heat	J/(g · K)		1.2
Coefficient of thermal expansion	10 ⁻⁵ /K		8-11
Electrical			
Dielectric constant at 10 ⁵ Hz		53 483	3.3 **
Dielectric loss factor at 10 ⁵ Hz		53 483	0.015 **
Specific volume resistance	Ω · cm	53 482	10 ¹⁵ **
Surface resistance	Ω	53 482	10 ¹³ **
Dielectric strength 1 mm	kV/mm	53 481	>22 **
Tracking resistance		53 480	KA 3b **
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	53 714	0.4
Water absorption at saturation at 23 °C	%	53 495	0.7
Resistance to hot water, washing soda			not resistant
Flammability according to UL standard 94			HB
Resistance to weathering			Grey not resistant Black resistant

** Electrical values are valid for grey material. They may be reduced in the case of black material

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3,5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication