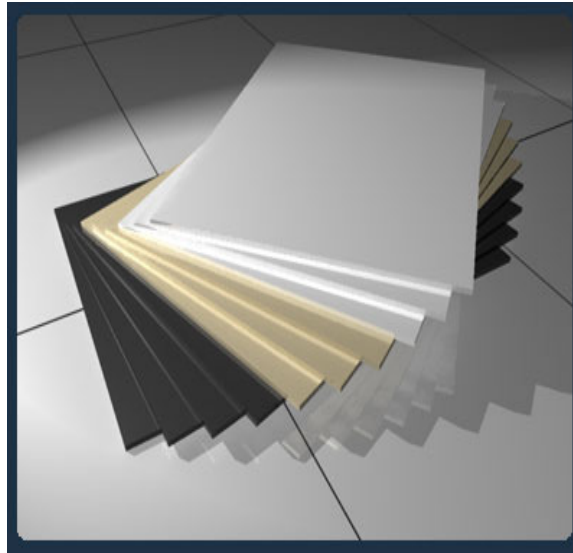


Material Information Sheet – ABS



Description

ABS (Acrylo-nitrile Butadiene Styrene) is a versatile plastic material used to make light, rigid products where moderate levels of performance are acceptable. The material is particularly easy to shape, cut and bond; post-painting or similar treatments can be carried out where necessary with minimal preparation.

Its main characteristics are as follows:-

- High rigidity
- Good impact resistance, even at low temperatures
- Easily processed (can be electroplated or post-painted)
- Good insulating properties
- Good bondability/weldability
- Good abrasion and stain resistance
- High dimensional stability (low water absorption)

Limitations

Although ABS is a good general purpose plastic and can be used in many applications, it does have certain limitations:-

- Poor resistance to Ultra-violet light
- Can be easily scratched
- Poor solvent resistance
- Can suffer from stress cracking in the presence of some greases.

Applications in Sign-making

ABS is traditionally used for large short- to mid-term signage where good rigidity is required whilst maintaining lightness.

The ease in which ABS can be drilled, cut and bonded make it comparatively easy to install.

It is particularly suited to coated or plating and it can readily be printed using a variety of techniques (such as wide-format digital printing, screen printing etc.). ABS can be readily engraved and responds well to both laser and rotary techniques.

Due to its moderate weathering performance it is not recommended for long-term signage.

Special Grades

ABS can be supplied in a variety of formulated grades for specific applications:-

- High-impact
- Fire-retardant
- Acrylic capped (High gloss)

Physical Properties (Typical)

The data are typical values and are not intended to represent specifications. Their aim is to guide the user towards a material choice. All statements, technical information and recommendation in this product data sheet are presented in good faith, based upon test believed to be reliable and practical experience. However, Bay Plastics Ltd cannot guarantee the accuracy or completeness of this information, and it is the buyer's responsibility to determine the suitability of products in any given application. Therefore no liability whatsoever shall attach to Clarity Sign and Design limited for any infringement of the rights owned or controlled by a third party in intellectual, industrial or other property by reason of application, processing or use of the aforementioned information or products by the buyer.

Property	Unit	Test Method	Value
Density	g/cm ³	DIN 53479	1.04-1.06
Tensile strength at yield	MPa	DIN 53455	50
Ball indentation hardness	MPa	DIN 53456	85
Modulus of elasticity in tension	MPa	DIN 53457	2400
Impact strength	Kj/m ²	DIN 53453	220
Glass transition temperature	°C	DIN 53736	115
Max. service temperature (Short term)	°C	-	100
(Long term)	°C	-	75
Water absorption at saturation at 23 °C	%	DIN 53495	0.7



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Availability

ABS is commonly supplied in sheet form in thicknesses from 1mm through 20mm. It is available in a variety of finishes:-

- Smooth
- Pin-seal embossed
- Carbon-fibre effect
- Leather/wood grain

It is available in a small range of colours:-

- White
- Black
- Grey

Further information

For further information contact:-

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