

Technical datasheet for: epsotech AB MG1 XE

Overview and Structure

epsotech AB MG1 XE is a multi-layer product made from ABS (partial or up to 100% customer material) co-extruded with PMMA, with a glossy surface aspect.

Typical Physical Properties

Property	Value	Unit	Standard	Test Method
GENERAL PROPERTIES:				
Density*	1.08	g/cm ³	ISO 1183	-
MECHANICAL PROPERTIES:				
	(1. see note)			
Tensile Modulus	≥1850	MPa	ISO 527	23°C
Yield stress	≥35	MPa	ISO 527	23°C
Elongation at Yield	≥2.6	%	ISO 527	23°C
Tensile Strength at Break	≥35	MPa	ISO 527	23°C
Elongation at Break	≥15	%	ISO 527	23°C
Charpy (notched)	≥10	KJ/m ²	ISO 179	23°C, 1eA
Charpy (notched)	-	KJ/m ²	ISO 179	-30°C, 1eA
Charpy (un-notched)	≥15	KJ/m ²	ISO 179	23°C, 1eU
Charpy (un-notched)	-	KJ/m ²	ISO 179	-30°C, 1eU
THERMAL PROPERTIES:				
VICAT softening Point	≥92	°C	ISO 306	B/50
HDT-A	≥80	°C	ISO 75	A 1.8MPa, unannealed
UV STABILISATION:				
UV Stabilisation	Optional	-	-	According to customer requirement
BURNING BEHAVIOUR:				
Burning Rate	-	-	-	-
Flammability Rating	-	-	-	-
Flammability Rating UL**	-	-	-	-
SCRATCH/SURFACE:				
	-	-	-	-
MISCELLANEOUS:				
Mould Shrinkage	0.5 - 0.7	%	-	-
Thermoforming Temperature	180 – 210	°C	-	-

Unless otherwise stated, products are tested at a typical thickness of 4mm

¹ The impact values stated indicate the range that this grade meets and *depends on thickness of the sheet, plus actual material grades selected in each layer for every customer's project – typically customised*. Mechanical suitability for each formulation should be evaluated based on the material delivered.

Products made partially or in full, with regrind materials provided for re-extrusion by customers, may result in variable properties and sheet quality, depending on the consistency and quality of material supplied. epsotech does not guarantee technical characteristics and performance on this basis.

* The density quoted should only be used as a guide. This value can change depending upon the type and quantity of pigments or additives used.

** Fire behaviour values given by raw material supplier or by indicative test on raw material. Not intended as a specification

Supplemental Information

Chemical Contact and cleaning

Reagent	Chemical resistance	Reagent	Chemical resistance
Acetone	Not recommended	Brake Fluid	Not Recommended
Acid – (Weak)	Excellent	Butter	Excellent
Acid – (Strong)	Good	Coffee	Excellent
Alcohol	Good/Fair	Detergent	Excellent
Anti-freeze	Excellent	Diesel	Good
Base (Weak)	Excellent	Foodstuffs	Good
Base (Strong)	Good	Lubricating Oil	Very Good
Battery Acid	Good	Petrol	Good

Chemical resistance is influenced by many factors, including concentration, temperature, exposure time and material stress. Therefore the data should only be used as a guide.

Most common mild soaps or detergents dissolved in warm water can be used to effectively clean general dirt and surface contaminants, but in all cases should be objectively tested. Abrasive products will damage the surface.

Storage and Drying

Long storage times in humid conditions may require a product to be dried, e.g. 80°C for 2 hours +1hr per additional mm of thickness. Space must be left between sheets to allow correct drying.

Dimensional Tolerances

Standard tolerances are subject to the local standard tolerance set. Extra tolerance requirements may be possible on request and by special agreement

Product Modification

Product code nomenclature takes in to account selected primary features of a product. The suffix may indicate a primary additional functionality, however, further multiple modifications are almost always possible and may be agreed upon and specified prior to our technical and commercial offer. Such enhancements are a normal part of our service capability and they do not affect the general characteristics listed in technical datasheets.

Disclaimer:

Suitability for use - epsotech sells thermoplastic sheet and monofilament products. The above information describes the basic features of our products. However, these are largely influenced by their specific application, the application environment, final processing and the customer's intended usage. We recommend that in each case the suitability of our products for the intended usage is thoroughly listed and evaluated. We do not give any warranty or guarantee for any particular quality required by a customer or for the usability of our products in any particular customer environment. epsotech will under no circumstance be liable for wear and tear, for damages resulting from disregard of product instructions – including those contained in this technical data sheet – operating instructions, disregard of other instructions, misuse, alteration or unauthorised repairs or processing. All deliveries shall be subject to the Terms and Conditions of the Seller.

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