

## Technical datasheet for: epsotech AB EM1 NC

### Overview and Structure

epsotech AB EM1 NC is a multi-layer product made from ABS, soft-feel TPE top layer, with a matt surface aspect.

### Typical Physical Properties

Property	Value	Unit	Standard	Test Method
<b>GENERAL PROPERTIES:</b>				
Density*	1.07	g/cm <sup>3</sup>	ISO 1183	-
Hardness	59	Shore D	ISO 868	-
<b>MECHANICAL PROPERTIES:</b>				
Tensile Modulus	1720	MPa	ISO 527	23°C
Yield stress	32	MPa	ISO 527	23°C
Elongation at yield	3	%	ISO 527	23°C
Tensile Strength	32	MPa	ISO 527	23°C
Elongation at break	30	%	ISO 527	23°C
Charpy (notched)	10-14 <sup>1</sup>	KJ/m <sup>2</sup>	ISO 179	23°C, 1eA
Charpy (un-notched)	140	KJ/m <sup>2</sup>	ISO 179	23°C, 1eU
<b>THERMAL PROPERTIES:</b>				
VICAT softening Point	-	°C	ISO 306	B/50
HDT-A	-	°C	ISO 75	A 1.8Mpa annealed
HDT-A	-	°C	ISO 75	A 1.8Mpa unannealed
CLTE	80 - 110	10 <sup>-6</sup> /°C	ISO 11359	-
<b>UV STABILISATION:</b>				
UV Stabilisation	Optional	-	-	According to customer requirement
<b>BURNING BEHAVIOUR:</b>				
Burning Rate	Fulfils	-	FMVSS 302 2mm, 4mm	Ref: Document „ABS Brennverhalten“ (Report FILK number 173400)
Burning Rate	Fulfils	-	DIN 75200 2mm, 4mm	Ref: document „ABS Brennverhalten“ (Report FILK number 173400)
Flammability Rating UL**	-	-	UL94	-
<b>SCRATCH/SURFACE:</b>				
<b>MISCELLANEOUS:</b>				
Mould Shrinkage	0.5 - 0.7	%	-	-
Thermoforming Temperature	180 – 210	°C	-	-

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

<sup>1</sup> 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.

\* 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

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.

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