

Technical datasheet for: epsotech PE HB1 C2

Overview and Structure

epsotech PE HB1 C2 is a single layer product made from high density Polyethylene, with a content of Calcium Carbonate up to 20%, depending on customer requirements. Values shown at 20%.

Typical Physical Properties

Property	Value	Unit	Standard	Test Method
GENERAL PROPERTIES:				
Density*	1.05	g/cm ³	ISO 1183	-
MECHANICAL PROPERTIES:				
Tensile Modulus	1200	MPa	ISO 527	23°C 1mm/min
Yield stress	20	MPa	ISO 527	23°C 50mm/min
Elongation at Yield	10	%	ISO 527	23°C 50mm/min
Elongation at Break	200	%	ISO 527	23°C 50mm/min
Tensile Strength at Break	13	MPa	ISO 527	23°C 50mm/min
Charpy (notched)	7.5	KJ/m ²	ISO 179	23°C, 1eA
Charpy (notched)	-	KJ/m ²	ISO 179	-30°C, 1eA
Charpy (un-notched)	NB	KJ/m ²	ISO 179	23°C, 1eU
Charpy (un-notched)	-	KJ/m ²	ISO 179	-30°C, 1eU
THERMAL PROPERTIES:				
VICAT softening Point	79	°C	ISO 306	B/50
HDT-A	-	-	-	-
UV STABILISATION:				
UV Stabilisation	Optional	-	-	According to customer requirement
BURNING BEHAVIOUR:				
Flammability Rating UL**	HB**	-	-	
SURFACE/VOLUME:				
Co-efficient of Linear Expansion	-	10 ⁻⁵ /K	ISO 7992	
Volume Resistivity	>10 ¹²	Ωcm	EN 61340-5-1	
Surface Resistivity	>10 ¹³	Ω	EN 61340-5-1	
MISCELLANEOUS:				
Mould Shrinkage	1.8 – 3.4	%	-	-
Thermoforming Temperature	130 - 200	°C	-	-

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

* 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	Very good		Beer	Excellent
Acid – (Weak)	Excellent		Brake Fluid	Very good
Acid – (Strong)	Very good		Coffee	Excellent
Alcohol	Very good		Detergent	Excellent
Anti-freeze	Excellent		Diesel	Good
Base (Weak)	Excellent		Foodstuffs	Excellent
Base (Strong)	Good		Lubricating Oil	Good
Battery Acid	Very 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

HDPE has a very low moisture absorption, therefore pre-drying is not normally required

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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