

Technical datasheet for: epsotech AB SM3 AM

Overview and Structure

epsotech AB SM3 AM is an ABS co-extruded with matt ASA, with anti-microbial and ESCR properties (material can be adapted to meet specific requirements on request).

Typical Physical Properties

Property	Value	Unit	Standard	Test Method
GENERAL PROPERTIES:				
Density*	1.08	g/cm ³	ISO 1183	-
MECHANICAL PROPERTIES:				
Tensile E-Modulus	1800	MPa	ISO 527	23°C
Yield stress	31	MPa	ISO 527	23°C
Elongation at break	-	%	ISO 527	23°C
Charpy (notched)	20 - 24 ¹	KJ/m ²	ISO 179	23°C, 1eA
Charpy (notched)	-	KJ/m ²	ISO 179	-30°C, 1eA
Charpy (un-notched)	-	-	-	-
Charpy (un-notched)	-	-	-	-
THERMAL PROPERTIES:				
VICAT softening Point	104	°C	ISO 306	A/50
HDT-A	82	°C	ISO 75	A 1.8MPa
UV STABILISATION:				
UV stabilisation	Optional	-	-	According to customer requirement
BURNING BEHAVIOUR:				
Burning Rate**	-	-	-	
Flammability Rating	-	-	-	
Flammability Rating UL**	-	-	-	
SCRATCH/SURFACE:				
Anti-bacterial surface	Details on request			JIS Z 2810-2010 (E-coli, Staphylococcus aureus)
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 of 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

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

This product exhibits a higher chemical resistance versus ABS according to ISO 22088 point 3.

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. Examples of further enhancements, possible on most products but not included in product coding, are: UV stabilisation, corona and other surface treatments, special surface effects, etc.

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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Edition 1, September 2019

Published by epsotech Holding GmbH, Im Reinfeld 2, Jülich Kirchberg, 52428 Germany