

## Technical datasheet for: epsotech PP HS0 R6 (Metzoplast Railway R6 until [01 May 2020])

### Overview and Structure

epsotech PP HS0 R6 is a halogen-free Polypropylene sheet compliant to EN 45545-2 HL3 R6 (seat shell and seat components). This product has exceptional low heat release, smoke density and toxicity properties. It is easy to form, has excellent rigidity and has a matt surface aspect. It is an excellent alternative to Polycarbonate. Full technical support with specific fabrication, forming and bonding guidance is available on request.

### Typical Physical Properties

Property	Value	Unit	Standard	Test Method
<b>GENERAL PROPERTIES:</b>				
Density*	1.07	g/cm <sup>3</sup>	ISO 1183	-
<b>MECHANICAL PROPERTIES:</b>				
Tensile Modulus	2200	MPa	ISO 527	23°C 1mm/min
Yield stress	22	MPa	ISO 527	23°C 50mm/min
Elongation at Yield	3	%	ISO 527	23°C 50mm/min
Elongation at Break	20	%	ISO 527	23°C 50mm/min
Charpy (notched)	2.2	KJ/m <sup>2</sup>	ISO 179	23°C, 1eA
Charpy (notched)	-	KJ/m <sup>2</sup>	ISO 179	-30°C, 1eA
Charpy (un-notched)	12	-	ISO 179	23°C, 1eU
Charpy (un-notched)	-	-	-	-
<b>THERMAL PROPERTIES:</b>				
VICAT softening Point	101	°C	ISO 306	B/50
HDT-A	-	-	-	-
<b>UV STABILISATION:</b>				
-	-	-	-	-
<b>BURNING BEHAVIOUR:</b>				
Flame Spread	-	-	-	-
MAHRE (max. average rate of heat emission)	≤ 60	kW/m <sup>2</sup>	ISO 5660-1: 2015 + A1: 2019	T03.01, 50 kW/m <sup>2</sup>
Smoke Density	≤ 150	D <sub>s</sub> (4) (-)	EN ISO 5659-2	T10.01, 50 kW/m <sup>2</sup>
Smoke Density	≤ 300	VOF <sub>4</sub> (min)	EN ISO 5659-2	T10.02, 50 kW/m <sup>2</sup>
Toxicity	≤ 0.75	CIT <sub>G</sub> (-)	EN ISO 5659-2	T11.01, 50 kW/m <sup>2</sup>
<b>SURFACE/VOLUME:</b>				
Gloss Level	≤ 2	-	DIN 67530	60°
<b>MISCELLANEOUS:</b>				
Mould Temperature	80 - 90	°C	-	Guidance on request
Thermoforming Temperature	143 - 164	°C	-	Guidance on request

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	Good		Coffee	Excellent
Alcohol	Good		Detergents	Excellent
Aliphatic Hydrocarbons	Good		Foodstuffs	Excellent
Aromatic Hydrocarbons	Poor		Grease	Fair

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

PP 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.

**Right to make changes** – epsotech reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof. The latest version of a published datasheet shall be available for download from the epsotech website, or the subsidiary websites of Carolex SAS and Axipack SAS, depending on the product range.

**Limited warranty and liability** - Information in this document is believed to be accurate and reliable. However, epsotech and/or its subsidiaries do not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. epsotech takes no responsibility for the content in this document if provided by an information source outside of epsotech. In no event shall epsotech be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory. Notwithstanding any damages that the customer might incur for any reason whatsoever, aggregate and cumulative liability by epsotech towards customers for the products described herein shall be limited in accordance with the terms and conditions of commercial sale of epsotech.

Edition 1, September 2019

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