



Corecell™ P-Foam

Structural Core Material

- **Excellent impact tolerance**
- **Suitable for dynamically-loaded structures**
- **Suitable for processing with prepregs up to 85°C**
- **Superior styrene and temperature resistance to linear PVC foam**
- **Highly thermoformable**

Introduction

Corecell P-Foam shares the benefits of SAN chemistry common to all **Corecell** products.

Environmental stability – Tolerance for heat and chemical exposure

Built in toughness – Very high ductility and damage tolerance compared to cross-linked PVC and Balsa

Fine cell size – Resin absorption is very low, saving both weight and cost

Superior uniformity – Low density variation

Eliminating outgassing – **Corecell** eliminates the problems of foam outgassing

Compatibility – Suitable for use with all polyester, vinylester and epoxy resins

No inhibition – **Corecell** does not inhibit epoxy curing mechanisms

Handling – Tough and easy to machine

Corecell P-Foam is a development of **Corecell** A-Foam, intended for prepreg and SPRINT® manufacturing processes. **Corecell** P-Foam has incredible toughness and resistance to cracking, which comes from its high ductility. **Corecell** P-Foam can elongate up to 65% in shear before failure, making core shear failure in a laminate almost impossible.

For the manufacturer of prepreg or SPRINT® structures, especially yacht hulls, **Corecell** P-Foam removes the problems of outgassing inhibition or thermal stability. **Corecell** P-Foam is also highly thermoformable, which is invaluable in the construction of high performance prepreg or SPRINT® structures.



Type	Test Method	Units	P500	P600	P800	P1200
Nominal Density		kg/m ³	100	122	155	220
		lb/ft ³	6.2	7.6	9.7	13.7
Density Range		kg/m ³	89-110	111-133	140-169	200-240
		lb/ft ³	5.5-6.9	7.0-8.3	8.7-10.5	12.5-15.0
Compression Strength	ASTM D1621	MPa	1.25	1.78	2.67	4.90
		psi	181	258	387	710
Compressive Modulus	ASTM D1621 – 1973	MPa	81	113	166	295
		psi	11710	16330	24030	42800
	ASTM D1621 – 2004	MPa	57	80	117	209
		psi	8280	11550	16990	30260
Shear Strength	ASTM C273	MPa	1.34	1.65	2.12	3.06
		psi	194	240	307	443
Shear Modulus	ASTM C273	MPa	37	48	65	101
		psi	5360	6940	9360	14640
Shear Elongation at break	ASTM C273	%	70%	65%	58%	49%
Tensile Strength	ASTM D1623	MPa	1.78	2.21	2.85	4.17
		psi	258	321	414	605
Tensile Modulus	ASTM D1623	MPa	100	135	191	320
		psi	14510	19570	27670	46460
Thermal Conductivity	ASTM C518	W/mK	0.04	0.04	0.04	0.05
HDT	DIN 53424	°C	80	80	80	80
		°F	176	176	176	176

Please Note:

Intermediate densities may be available on request subject to minimum order quantities.

Data quoted is average data at each product's nominal density, and is derived from our regular testing of production materials.

Statistically derived minimum value data, satisfying the design requirements of various classification societies, is available on request.

Notice

SP-High Modulus is the marine business of Gurit (the company). All advice, instruction or recommendation is given in good faith but the Company only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at the Company's Website: www.gurit.com/termsandconditions_en.html.

The Company strongly recommends that Customers make test panels and conduct appropriate testing of any goods or materials supplied by the Company to ensure that they are suitable for the Customer's planned application. Such testing should include testing under conditions as close as possible to those to which the final component may be subjected. The Company specifically excludes any warranty of fitness for purpose of the goods other than as set out in writing by the Company. The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit are continuously reviewing and updating literature. Please ensure that you have the current version, by contacting Gurit Marketing Communications or your sales contact and quoting the revision number in the bottom right-hand corner of this page.

UK

St Cross Business Park
Newport, Isle of Wight
United Kingdom PO30 5WU
T +44 (0) 1983 828 000
E marine@gurit.com

Australia

Unit 1A / 81 Bassett Street,
Mona Vale, 2103 NSW,
Australia
T +61 (0) 2 9979 7248
E sales-au@gurit.com

New Zealand

32 Canaveral Drive, Albany,
Private Box 302-191,
North Harbour, 0751
Auckland, New Zealand
T +64 (0) 9 415 6262

Canada

175 rue Péladeau,
Magog, (Québec)
J1X 5G9, Canada
T +1 819 847 2182
E info-na@gurit.com
W www.gurit.com