

Gurit[®] G-PET[™]

RECYCLABLE STRUCTURAL FOAM



- Withstands high process temperatures
- Excellent chemical resistance
- Good adhesion
- Excellent mechanical properties
- Recyclable
- Compatible with all types of composite processes
- DNV·GL approved
- American Bureau of Shipping (ABS) approved
- Now available with Gurit[®] G-PET[™] LITE surface treatment technology to reduce resin uptake

INTRODUCTION

Highly adaptable, recyclable, thermoplastic core material with good balance of mechanical properties, temperature resistance, density and cost for a wide range of applications and processes.

Gurit[®] G-PET[™] is compatible with a wide range of resin systems including epoxy, vinyl ester, unsaturated polyester and phenolic resins. It offers class leading high shear elongation properties.

Gurit[®] G-PET[™] can be processed at high temperatures, withstanding exotherms up to 150°C and offers outstanding fatigue properties, chemical resistance, good adhesion, is a highly consistent extruded foam, it is ideal for wind energy, marine, industrial, and transportation applications.

Applicable processing techniques include vacuum infusion, bonding, prepreg, and thermoforming. Available in a wide range of thicknesses, and finishes.

INSTRUCTIONS FOR USE

General working practices apply to these products, details of which can be obtained from the Gurit Guide to Composites or by contacting a Gurit representative (contact details provided at the end of this datasheet).

MECHANICAL PERFORMANCE

| Type | Test Method | Units | Gurit® G-PET™ 80 | | Gurit® G-PET™ 90 | | Gurit® G-PET™ 110 | | Gurit® G-PET™ 135 | | Gurit® G-PET™ 200* | |
|---------------------------|--------------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|----------------------|---------------------|-----------------------|---------------------|
| | | | Brown | Yellow | Brown | Orange | Brown | Blue | Brown | Grey | Brown | Black |
| Short Edge Marking | - | - | Brown | Yellow | Brown | Orange | Brown | Blue | Brown | Grey | Brown | Black |
| Nominal Sheet Size | - | mm | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 | 1005/1220 x 2440 |
| | | inches | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 | 39.5/48 x 96 |
| Density | ISO 845 | kg/m ³ | 80 | 94 | 114 | 135 | 200 | | | | | |
| | | lb/ft ³ | 5.0 | 5.9 | 7.1 | 8.4 | 12.5 | | | | | |
| Density Range | ISO 845 | kg /m ³ | 75-85 | 89-99 | 109-119 | 130-140 | 190-210 | | | | | |
| | | lb/ft ³ | 4.7-5.3 | 5.6-6.2 | 6.8-7.4 | 8.1-8.8 | 11.9-13.1 | | | | | |
| Compressive Strength | ASTM D1621 – 2010 (ISO 844) | MPa | 0.96 | 1.27 | 1.71 | 2.17 | 3.56 | | | | | |
| | | psi | 139 | 184 | 248 | 315 | 516 | | | | | |
| Compressive Modulus | ISO 844 | MPa | 77 | 95 | 120 | 146 | 205 | | | | | |
| | | psi | 11168 | 13779 | 17405 | 21176 | 29733 | | | | | |
| Shear Strength | ASTM C273 | MPa | 0.53 | 0.70 | 0.94 | 1.19 | 1.81 | | | | | |
| | | psi | 77 | 102 | 136 | 173 | 263 | | | | | |
| Shear Modulus | ASTM C273 | MPa | 13 | 19 | 27 | 35 | 53 | | | | | |
| | | psi | 1885 | 2756 | 3916 | 5076 | 7687 | | | | | |
| Shear Elongation at break | ASTM C273 | % | 44 | 39 | 32 | 25 | 19 | | | | | |
| Tensile strength | ASTM D1623 | MPa | 1.49 | 1.66 | 1.91 | 2.16 | 2.48 | | | | | |
| | | psi | 216 | 241 | 277 | 313 | 360 | | | | | |
| Tensile modulus | ASTM D1623 | MPa | 89 | 112 | 143 | 177 | 241 | | | | | |
| | | psi | 12908 | 16244 | 20740 | 25672 | 34954 | | | | | |
| HDT | DIN 53424 | °C | 200 | 200 | 220 | 220 | 220 | | | | | |
| | | °F | 392 | 392 | 428 | 428 | 428 | | | | | |

* Gurit® G-PET™ 200 is not type approved by 3rd party.

Data quoted is average data at each product's nominal density. Full datasets statistically derived minimum value data is available on request.

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (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 Gurit's Website: www.gurit.com/terms-and-conditions.aspx

The Company strongly recommends that Customers make test panels in the final process conditions and conduct appropriate testing of any goods or materials supplied by the Company prior to final use 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. Due to the varied nature of end-use applications, the Company does, in particular, not warrant that the test panels in the final process conditions and/or the final component pass any fire standards.

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 is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

Telephone + 44 1983 828000 (08:30 – 17:00 GMT)
Email technical.support@gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

For advice on chemical emergencies, spillages, fires or exposures:

Europe +44 1273 289451
Americas +1 646 844 7309
APAC +65 3158 1412

G-PET is a registered trademark in the EU and in other countries.

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