

This datasheet is based on provisional product data and is subject to revision.

# Gurit® Kerdyn™ Green FR

## RECYCLABLE STRUCTURAL FOAM



- Gurit® Kerdyn™ Green FR: up to 100% recycled PET based product range
- Withstands high process temperatures
- Excellent chemical resistance
- Good adhesion & mechanical properties
- Recyclable
- PET low resin uptake performance
- Excellent FST performance

### INTRODUCTION

**Gurit® Kerdyn™ Green FR have been developed in order to meet the growing need for structural core materials with good Fire, Smoke and Toxicity (FST) properties used in Marine, Civil and Transportation markets and combine the environmental consideration towards overall goals of waste reduction.**

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® Kerdyn™ FR is compatible with a wide range of resin systems including epoxy, vinyl ester, unsaturated polyester and phenolic resins.

Gurit® Kerdyn™ FR can be processed at high temperatures, withstanding high exotherms and offers outstanding chemical resistance, good adhesion; as 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.

## 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).

### TYPICAL MECHANICAL PROPERTIES

| PROPERTY                 | UNIT               | Kerdyn™ Green<br>80FR | Kerdyn™ Green<br>115FR | Kerdyn™ Green<br>180FR | STANDARD    |
|--------------------------|--------------------|-----------------------|------------------------|------------------------|-------------|
| Edge Marking             | -                  | TBC                   | TBC                    | TBC                    | -           |
| Nominal<br>Sheet Size    | mm                 | 1005 x 2440           | 1005 x 2440            | 1005 x 2440            | -           |
|                          | Inches             | 39.5 x 96             | 39.5 x 96              | 39.5 x 96              | -           |
| Nominal<br>Density       | kg/m <sup>3</sup>  | 80                    | 115                    | 180                    | ISO 845     |
|                          | lb/ft <sup>3</sup> | 4.99                  | 7.18                   | 11.24                  |             |
| Typical<br>Density range | kg/m <sup>3</sup>  | 75-85                 | 110-120                | 173 - 187              | ISO 845     |
|                          | lb/ft <sup>3</sup> | 4.68-5.31             | 6.87-7.49              | 10.8-11.67             |             |
| Compression<br>Strength  | MPa                | 1.00                  | 1.60                   | 3.05                   | ASTM D1621  |
|                          | Psi                | 145                   | 232                    | 442                    |             |
| Compressive<br>Modulus   | MPa                | 72                    | 101                    | 165                    | ISO 844     |
|                          | Psi                | 10443                 | 14649                  | 23931                  |             |
| Shear<br>Strength 0°     | MPa                | 0.60                  | 0.90                   | 1.70                   | ASTM C-273  |
|                          | Psi                | 87                    | 130                    | 246                    |             |
| Shear<br>Modulus 0°      | MPa                | 18                    | 29                     | 53                     | ASTM C-273  |
|                          | Psi                | 2611                  | 4206                   | 7687                   |             |
| Shear<br>Strength 90°    | MPa                | 0.60                  | 0.90                   | 1.65                   | ASTM C-273  |
|                          | Psi                | 87                    | 130                    | 239                    |             |
| Shear<br>Modulus 90°     | MPa                | 17                    | 27                     | 49                     | ASTM C-273  |
|                          | Psi                | 2465                  | 3916                   | 7107                   |             |
| Shear<br>Elongation      | %                  | 16                    | 12                     | 8                      | ASTM C-273  |
| Tensile<br>Strength      | MPa                | 1.40                  | 1.80                   | 2.50                   | ASTM D-1623 |
|                          | Psi                | 203                   | 261                    | 363                    |             |
| Tensile<br>Modulus       | MPa                | 84                    | 117                    | 183                    | ASTM D-1623 |
|                          | Psi                | 12183                 | 16969                  | 26542                  |             |

## 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](http://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     | <a href="mailto:technical.support@gurit.com">technical.support@gurit.com</a> |

## 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   |

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