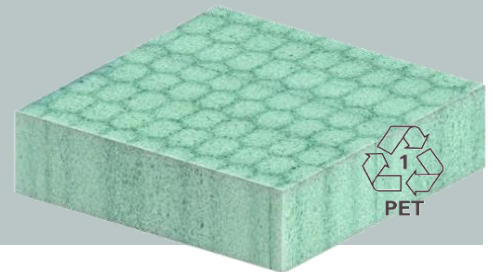


Gurit Kerdyn™ 180 FR

STRUCTURAL FOAM CORE

RECYCLED AND RECYCLABLE



Gurit Kerdyn™ 180FR has been developed to meet the growing need for structural and recycled core materials with good Fire, Smoke, Toxicity (FST) properties used in Marine, Civil and Transportation markets and to combine the environmental consideration towards overall goals of waste reduction.

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

The core can be processed at high temperatures, withstanding high exotherms and offers chemical resistance as well as good adhesion to many substrates.

Gurit Kerdyn™ 180FR is compatible with a wide range of resin systems from epoxy to polyester (not limited to) and with all composite processing methods.

TYPICAL APPLICATIONS

As highly consistent extruded foam, Kerdyn™ 180FR is ideal for applications in:

- **Marine** for interiors and panel furniture
- **Industrial** for housing, container, window frames, interiors
- **Transportation** for bus/truck, interiors, caravanning, automotive

- Wide range of thicknesses
- Fully recyclable and up to 100% recycled PET based
- Good fire behaviour (FST)
- Withstands high processing temperatures
- Good chemical resistance
- Good adhesion to substrates
- Good mechanical properties
- Low resin uptake performance
- High bending strength
- High pressure resistance
- Dimensionally stable
- Easy to handle and machine
- Good thermal insulation
- Good screw retention



TECHNICAL INFORMATION

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).

PROPERTY	UNIT	Kerdyn™ 180FR	STANDARD
Nominal Density	kg/m ³	180	ISO 845
	lb/ft ³	11.2	
Typical Density range	kg/m ³	173-187	ISO 845
	lb/ft ³	10.8-11.6	
Compression Strength (Through thickness)	MPa	3.0	ISO 844
	Psi	442	
Compressive Modulus (Through thickness)	MPa	165	ISO 844
	Psi	23 930	
Compression Strength (90°)	MPa	1.71	ISO 844
	Psi	248	
Compressive Modulus (90°)	MPa	96	ISO 844
	Psi	13 779	
Tensile Strength (Through thickness)	MPa	2.5	ASTM D-1623
	Psi	360	
Tensile Modulus (Through thickness)	MPa	183	ASTM D-1623
	Psi	26 540	
Shear Strength 0°	MPa	1.7	ASTM C-273
	Psi	250	
Shear Modulus 0°	MPa	53	ASTM C-273
	Psi	7 690	
Shear Strength 90°	MPa	1.65	ASTM C-273
	Psi	239	
Shear Modulus 90°	MPa	49	ASTM C-273
	Psi	7 107	
Shear Elongation	%	8	ASTM C-273
Thermal conductivity*** λ at 23°C	W/(m.K)	0.041	EN 12667
Fire Properties	Class	Class E*	EN 13501-1
Screw retention 0°	N	367**	EN 320
Screw retention 90°	N	425**	EN 320

* Rating dependent on thickness and density, users should test proposed configuration. ** Yellow SPAX 4.0 60mm 18mm insert no pilot hole

***Data for indication, normalized to nominal density, tests performed on sample size Length 600 x Width 600 x Thickness 50mm, users should test their own configuration according to their end-application or fit to purpose
Technical data are means values for information based on results achieved under specific and/or defined test conditions. Customer with specific requirements must carry out tests to prove conformity to their own requirements

PRODUCT DELIVERY

	UNIT	Length	Width	Diagonal	Thickness
Dimensions	mm	2440	1005/1220	(1)	5 – 200 (2)
	inches	96	39.5 / 48	(1)	0.2 – 7.9 (2)
Tolerances (3)	mm	-3 / +6	-3 / +5	< 2	< 100: +/- 0.5 ≥ 100: +/- 1
	inches	-0.12 / 0.24	-0.12 / 0.20	< 0.08	< 3.9: +/- 0.02 ≥ 3.9: +/- 0.04

(1) Depending on combination of length/width
(2) Maximum thickness depending on the density
(3) Tolerances at room temperature

Physical properties are not affected by variances in colour.
Customs tariff code: 39211900

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.

CONTACT INFORMATION

Please find your local contact information at www.gurit.com
Otherwise contact customer.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

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customer.support@gurit.com

www.gurit.com