

GURIT KERDYN™

STRUCTURAL FOAM CORE RECYCLED AND RECYCLABLE



Kerdyn is a thermoplastic foam developed to respond to the growing need for structural core materials and reduce product's carbon footprint and materials waste.

Based on recycled PET and fully recyclable material, Kerdyn is a highly stable and adaptable core material with good mechanical properties, lower resin uptake, and then an excellent balance between performances, cost, density and processability.

Kerdyn is compatible with mostly all resin systems including vinyl ester, epoxy, unsaturated polyester and usable with a wide range of processing technologies including vacuum infusion, prepreg, wet lay-up, bonding, kitting, thermoforming.

It can be processed at high temperatures, withstanding high exotherms and offers outstanding chemical resistance, low water absorption and a very good adhesion.

Kerdyn is available in a wide range of densities and thicknesses and can be delivered in Lite version, with surface treatment to lower resin uptake.

Surface finishing options to provide more flexibility in shaping and improve processing performances (pinholes, cuts, grooving or scrimmed) are available upon request.

Gurit can even tailor to your specific requirements through own kitting capabilities, please contact your local representative for further information.

TYPICAL APPLICATIONS

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

- **Wind energy** for rotor blades, nacelles, spinners, covers, tips
- **Marine** for deck, floor, hull, structures, bulkhead, interiors, furniture
- **Industrial** for housing, container, doors, window frames, domestic goods
- **Transportation** for automotive interiors, bus, trucks flooring, caravanning

- Density from 65 to 300 kg/m³
- Fully recyclable material
- Up to 100% recycled PET based product range
- Sustainable alternative to other foams or wood-based products
- Wide range of thicknesses
- Low resin uptake performance
- Wide processing methods
- Good mechanical properties
- Good chemical resistance
- Good adhesion skin to core
- Plain, finished, kitted sheets
- Sealed surface available
- DNV Certified



TECHNICAL INFORMATION

General working practices apply to these products can be obtained from the Gurit Guide to Composites or by contacting a Gurit representative (see contact information).

PROPERTY	UNIT	KERDYN 65	KERDYN 80	KERDYN 100	KERDYN 115	KERDYN 135	KERDYN 150	KERDYN 200	KERDYN 235	KERDYN 250	KERDYN 300	STANDARD
Nominal density	kg/m ³	70	80	100	115	135	150	200	235	250	300	ISO 845
	lb/ft ³	4.4	4.99	6.24	7.18	8.43	9.39	12.49	14.67	15.61	18.73	
Typical density range	kg/m ³	65 - 70	75 - 85	95 - 105	110 - 120	130 - 140	143 - 157	190 - 210	225 - 245	240 - 260	288 - 312	ISO 845
	lb/ft ³	4.1 - 4.7	4.68 - 5.31	5.93 - 6.55	6.87 - 7.49	8.11 - 8.74	8.93 - 9.80	11.86 - 13.11	14.05 - 15.29	14.98 - 16.23	17.98 - 19.48	
Compression strength	MPa	0.61	0.86	1.30	1.65	2.12	2.49	3.79	4.63	5.21	6.73	ISO 844
	Psi	88.5	125	189	239	307	361	550	672	756	976	
Compressive modulus	MPa	52	74	91	105	126	142	203	246	276	360	ISO 844
	Psi	7540	10 733	13 198	15 299	18 275	20 595	29 443	35 679	40 030	52 214	
Shear strength 0°	MPa	0.52	0.59	0.80	0.97	1.20	1.40	2.04	2.23	2.36	2.66	ASTM C-273
	Psi	75	81.22	116	141	174	203	296	323	342	386	
Shear modulus 0°	MPa	15	18	25	30	37	43	62	76	83	105	ASTM C-273
	Psi	2180	2 611	3 626	4 351	5 399	6 237	8 992	11 022	12 038	15 229	
Shear strength 90°	MPa	0.48	0.58	0.79	0.95	1.17	1.35	1.95	2.17	2.31	2.65	ASTM C-273
	Psi	2180	84.12	114	138	170	196	283	315	335	384	
Shear modulus 90°	MPa	12	16	23	27	34	39	57	69	75	93	ASTM C-273
	Psi	1740	2 321	3 336	3 916	4 931	5 656	8 268	10 008	10 878	13 488	
Shear elongation	%	24	16	16	13	10	9	6	5	4	-	ASTM C-273
Tensile strength	MPa	1.15	1.54	1.82	2.02	2.27	2.45	2.98	3.26	3.42	3.77	ASTM D-1623
	Psi	167	223	264	293	329	355	432	473	496	547	
Tensile modulus	MPa	65	85	103	116	136	152	214	260	290	-	ASTM D-1623
	Psi	9430	12 328	14 939	16 825	19 725	22 045	31 038	37 710	42 061	-	
Thermal conductivity** λ at 23°C (73°F)	W/(m.K)	0.032	0.032	0.033	0.034	0.036	0.037	0.040	0.043	0.044	0.047	EN 12667
	BTU/h·ft·°F	0.018	0.018	0.019	0.019	0.020	0.021	0.023	0.024	0.025	0.027	
Fire properties*	Class	Class E*										EN 13501-1

* Rating dependent on thickness and density, users should test their own proposed configuration

** 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.

The technical data are means values for information based on results achieved under specific and/or defined test conditions. Customers 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 color.
 Customs tariff code: 39211900

NOTICE

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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 see local contact information at www.gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

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

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