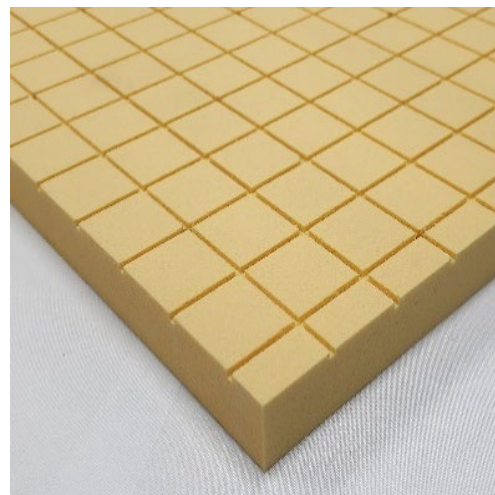


GURIT CORECELL™ S

STRUCTURAL FOAM CORE



Gurit Corecell S shares the benefits of SAN chemistry common to all Gurit Corecell products.

Built in toughness - High ductility and damage tolerance

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

Superior uniformity - More consistent density than resin-based syntactics

Eliminating outgassing - Gurit Corecell eliminates the problems of foam outgassing

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

No inhibition - Gurit Corecell does not inhibit any epoxy resin curing mechanisms

Handling - Robust for easy machining and use

Gurit Corecell S has been designed specifically for use in sub-sea buoyancy applications. Its resistance to crushing means that it can withstand depths of over 900m, and its closed-cell structure gives it a high water resistance that ensures buoyancy is maintained over time. With its very high compressive strength, Gurit Corecell S can also replace other materials, such as plywood, when creating high strength inserts for through-bolting in composite laminates.

Having the smallest cell size of all the Gurit Corecell products, Gurit Corecell S absorbs very little resin in lamination processes, thus minimizing weight gain. The small cell size and the product's inherent toughness also contribute to the excellent machinability of Gurit Corecell S. Complex shapes can be created in Gurit Corecell S using a variety of milling, routing, sawing and drilling techniques.

Gurit Corecell S is available at lower densities that can be achieved with a syntactic, with standard products ranging from 200 to just over 300kg/m³.

- High hydrostatic crush strength and water resistance
- Outstanding mechanical properties
- Ultra-fine cell size
- Lower density than resin-based syntactics

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	S1200	S1800
Short Edge Marking	-	-	Red	Brown
			Red	Mauve
Nominal Sheet Size	-	mm	890 x 1830	785 x 1600
		inches	35 x 72	31 x 63
Nominal Density	ASTM D1622	kg/m ³	210	315
		lb/ft ³	13.1	19.7
Density Range	ASTM D1622	kg/m ³	200-220	300-330
		lb/ft ³	12.5-13.7	18.7-20.5
Hydrostatic Crush Pressure (HCP)*	ASTM D-2736	Bar	61.9	109.7
		MPa	6.19	10.97
		psi	898	1,591
		M of Water	632	1119
Compressive Strength	ASTM D1621 or DIN 53421	MPa	4.71	9.17
		psi	683	1,330
Compressive Modulus	ASTM D1621b or DIN 53421 (1973)	MPa	293	515
		psi	42,496	74,694
	ASTM D1621 - 2016	MPa	213	379
		psi	30893	54969
Shear Strength	ISO 1922	MPa	2.91	5.21
		psi	422	756
Shear Modulus	ISO 1922	MPa	98	157
		psi	14,214	22,771
Shear Elongation at break	ISO 1922	%	13%	7%
Heat Distortion Temperature (HDT)**	DIN 53424	°C	100	110
		°F	212	230
Thermal Conductivity	ASTM C518	W/mK	0.05	0.06

* ASTM D-2736 PRACTICE A.

** at elevated temperature with flexural load

Please Note:

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.

If paint systems are to be applied to the foam directly it should be noted that some paint systems can degrade the properties of the foam. It is strongly recommended that testing is carried out to determine that the combination of products meets your in-service requirements it being impossible for Gurit to test all combinations of possible paint systems,

HEALTH AND SAFETY

The following points must be considered:

1. Skin contact must be avoided by wearing protective gloves. Gurit recommends the use of disposable nitrile gloves for most applications. The use of barrier creams is not recommended, but to preserve skin condition a moisturizing cream should be used after washing.
2. Protective clothing should be worn when mixing, laminating or sanding. Contaminated work clothes should be thoroughly cleaned before re-use.
3. Eye protection should be worn if there is a risk of resin, hardener, solvent or dust entering the eyes. If this occurs flush the eye with water for 15 minutes, holding the eyelid open, and seek medical attention.
4. Ensure adequate ventilation in work areas. Respiratory protection should be worn if there is insufficient ventilation. Solvent vapors should not be inhaled as they can cause dizziness, headaches, loss of consciousness and can have long term health effects.
5. If the skin becomes contaminated, then the area must be immediately cleansed. The use of resin-removing cleansers is recommended. To finish, wash with soap and warm water. The use of solvents on the skin to remove resins etc must be avoided.

Washing should be part of routine practice:

- before eating or drinking
- before smoking & vaping
- before using the lavatory
- after finishing work

6. The inhalation of sanding dust should be avoided and if it settles on the skin then it should be washed off. After more extensive sanding operations a shower/bath and hair wash is advised.

Gurit produces a separate full Safety Data Sheet for all hazardous products. Please ensure that you have the correct SDS to hand for the materials you are using before commencing work.

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 see local contact information at www.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

customer.support@gurit.com

www.gurit.com

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