



Gurit® Corecell™ T

STRUCTURAL FOAM CORE

- Suitable for all PVC core applications
- Excellent mechanical properties
- Outstanding chemical resistance
- 120°C processing
- Ideal for resin infusion

INTRODUCTION

Gurit® Corecell™ T shares the benefits of SAN chemistry common to all Gurit® Corecell™ products.

Environmental stability - High tolerance for heat and chemical exposure

Built in toughness - High ductility and damage tolerance compared to cross-linked PVC and Balsa

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

Superior uniformity - Low density variation

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 - Tough and easy to machine

Gurit® Corecell™ T has been developed as a technological step-change from traditional PVC and Balsa structural core. It has slightly higher stiffness properties and even greater styrene resistance than the more ductile Gurit® Corecell™ A. This makes it ideal for applications where loads are less dynamic in nature. Conceived for use above the waterline on yachts, on wind turbines and in mass transport, Gurit® Corecell™ T is an outstanding core material in every application where balsa or X-PVC is commonly used.

High mechanical toughness and thermal stability give Gurit® Corecell™ T excellent fatigue characteristics. This reliability makes Gurit® Corecell™ T a natural replacement for cross-linked PVC or balsa in applications where a significant service life is required.

The high temperature stability of Gurit® Corecell™ T also means that it can be used in manufacturing processes to at least 120°C with short durations during a cure cycle to over 150°C. This makes it ideal for use with conventional prepregs and in some liquid infusion processes where high resin exotherms can often be seen.

Gurit® Corecell™ T is available in every resin infusion format and is compatible with polyester, vinylester and epoxy resin systems. The low resin absorption characteristics of Gurit® Corecell™ and its unique knife cut formats allow for higher performing infusions, lower resin cost and lower weight than any other structural core material. Gurit's global technical team have 10 years experience in resin infusion and offer on-site support for Corecell customers. This combination makes Gurit® Corecell™ a key part of the most reliable resin infusion package available.

Gurit® Corecell™ T is approved by The American Bureau of Shipping, Germanischer Lloyd, Det Norske Veritas.

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	T400		T500	
Short Edge Marking	-	-	White	Green	White	Blue
Nominal Sheet Size	-	mm	1285 x 2605		1195 x 2440	
		inches	50.5 x 102.5		47 x 96	
Nominal Density		kg/m ³	71		94	
		lb/ft ³	4.4		5.9	
Density Range		kg/m ³	66-76		89-99	
		lb/ft ³	4.1-4.7		5.6-6.2	
Compressive Strength	ISO 844	MPa	0.92		1.59	
		psi	133		231	
Compressive Modulus	ISO 844	MPa	59		101	
		psi	8557		14649	
Shear Strength	ASTM C273	MPa	0.81		1.20	
		psi	117		174	
Shear Modulus	ASTM C273	MPa	29		40	
		psi	4206		5802	
Shear Elongation at break	ASTM C273	%	28%		14%	
Tensile strength	ASTM D1623	MPa	1.30		1.72	
		psi	189		249	
Tensile modulus	ASTM D1623	MPa	85		152	
		psi	12328		22046	
Thermal Conductivity	ASTM C518	W/mK	0.03		0.04	
HDT	DIN 53424	°C	100		100	
		°F	212		212	

* Peak change rate under static load

Intermediate densities may be available on request subject to minimum order quantities.

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.

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:

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