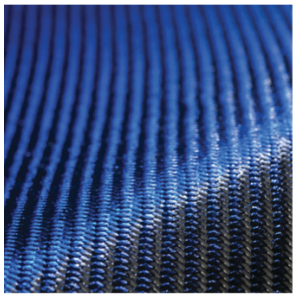
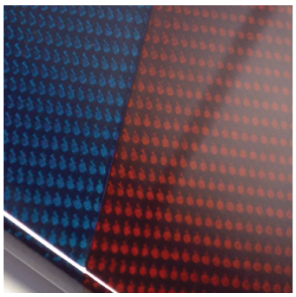
GURIT PRODUCT CATALOGUE
Europe, Middle East and Africa

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Introduction to Gurit

Gurit is renowned as one of the leading global manufacturers and suppliers of composite materials and engineering. Gurit's unique approach integrates structural design, materials science and process engineering to offer a complete turnkey composite solution.

Gurit offers a combination of innovative, durable, industry-leading composite products with an unrivalled in-house technical expertise, ensuring best-in-class operation wherever it is applied. The versatility and durability of Gurit's products and in-depth engineering knowledge means every project delivers a performance that is finely tuned to individual specifications and needs. Gurit's long history of development and innovation has increased part quality and durability while continual streamlining of processes have improved productivity and reduced costs.

Gurit offers an impressive portfolio of standardised and customised products suitable for a full range of requirements, including a comprehensive range of tooling, reinforcement and prepreg materials. Gurit's patent-approved, award-winning SPRINT™ technology offers lightweight, cost-effective solutions for a number of applications, potentially reducing production time and cost by 60%, and weight by 40%. Gurit® Corecell™ is a leading structural foam core material, which has become widely accepted for the construction of large, high performance structures.

How to use this Product Catalogue

This product catalogue has been produced to provide information on our main standard products. Gurit is also well served by a network of representatives, who hold stocks of Gurit products locally, and who can also act as a local point of contact for technical and sales information. A list of these representatives is given at the end of this publication.

Brief descriptions of each product and product group are given throughout this publication to facilitate product selection. Full information on any product should be obtained from the relevant technical datasheet. These can be obtained from the Gurit website, www.gurit.com or by contacting customer support. Contact details for customer support are given at the end of this publication.

The product catalogue structure is given in the contents page. For placing orders, contact details can be found at the end of this product catalogue. Written orders may be provided by fax, letter or email. Please use the order codes provided ensure that you obtain the correct products.

Contents

Formulated Products



Gurit is a leading supplier of high performance epoxy products formulated to meet market and customer needs.

Gurits innovative approach and expertise in epoxy formulations continues to deliver market leading products for a wide range of market segments. Gurit provides a complete range of formulated products from in-mould gelcoats to multi-purpose systems.

> Tooling Products

> Ampreg Laminating Systems

> PRIME™ Infusion Products

> Spabond Adhesives
  > Spabond 300 Series
  > Spabond 500 Series
  > Spabond 700 Series

> Coatings

> Multi-purpose Systems

Tooling Products

Mould Materials

Epoxy Tooling Paste

T-Paste 70-2 has been designed for customers looking for a fast and reliable way to manufacture patterns and direct moulds.

T-Paste 70-2 combined with CNC technology allows more design freedom and improves pattern/direct mould accuracy whilst reducing production processes.

T-Paste 70-2 (mix ratio 100:92 by weight / 100:100 by volume)

Resin Size	Order Code
T-Paste 70-2 190 litres Resin	F940-122

Hardener Size	Order Code
T-Paste 70-2 190 litres Hardener	F940-123

Please note: A mixing machine is required to mix and dispense the T-Paste 70-2 product. For more information on suitable mixing machines, please contact Gurit.

Laminating

T-Lam 130-1 (mix ratio 100:40 by weight)

Resin Size	Order Code
T-Lam 130-1 20 kg Resin	F140-202

Hardener Size	Order Code
T-Lam 130-1 Hardener 8Kg	F140-205

Infusion

T-Prime 130-1 (mix ratio 100:27 by weight)

Resin Size	Order Code
T-Prime 130-1 12.5 kg Resin	F163-102
T-Prime 130-1 185 kg Resin	F163-100

Hardener Size	Order Code
T-Prime 130-1 3.4 kg Hardener	F163-103
T-Prime 130-1 16.7kg Hardener	F163-106

3 x 16.75 kg of T-PRIME 130 hardener required to match 185 kg of resin

Gelcoats

CR 3400

In-Mould Epoxy Gelcoat / Surfacing System (mix ratio 100:30 by weight)

CR 3400 is an in-mould epoxy surfacing system for epoxy laminates and is designed to be used as the base for the subsequent application of a paint scheme. CR 3400 is therefore formulated to be easy to sand so that once released, the CR 3400 surface can be readily keyed prior to the application of the paint system. The product has a considerably longer overcoating window than other gelcoats - up to one day with Standard hardener at 20°C.

Resin Size	Order Code
CR3400 Resin 19 kg	F346-013

Hardener Size	Order Code
CR3400 Standard Hardener 5.7 kg	F346-015

Laminating Systems

Epoxy Laminating Comparison

System	Description	Hardener	Speed	Mix ratio by weight	Intended Application
SP 115	UV stable high clarity laminating system	115	30 mins	100:33.3	Surfboards, Clear parts
Ampreg 21	Good wet out; improved health and safety; low bi-product and good through cure	Fast Standard Slow Extra Slow High Tg	1-2 hrs 2-3 hrs 6-7 hrs 7-10 hrs 14 hrs	100:33.3	General purpose
Ampreg 22	Good wet out; low bi-product; good Tg generation	Fast Standard Slow Extra Slow 14 hour	1-2 hrs 2-3 hrs 6-7 hrs 7-10 hrs 14 hrs	100 : 28	Medium to large mouldings
Ampreg 26	Premium laminating system with high mechanical properties and high Tg	Fast Slow Ultra Slow	1-2 hrs 7 hrs 8-10 hrs	100:33.3	High performance large mouldings
Ampreg F230-1	3 component expanding epoxy system good for gap filling with consistent foam density	Slow Extra Slow	Fully foamed less than 1 hr, Cure time varies with geometry	100:23 100:23	Rudder foils, crash bars

For more detailed product information please refer to the product datasheets on www.gurit.com

Laminating Systems

Ampreg 21

Epoxy Wet Laminating System (resin to hardener mix ratio 100:33 by weight)

Ampreg 21 has a low initial mixed viscosity makes this product ideal for wetting out heavyweight fibres/fabrics. It has been designed to give excellent mechanical and thermal properties from both ambient temperature cures and moderate temperature postcures (50°C). Ampreg 21 is available with a range of hardener speeds from Fast to Extra Slow and has been formulated to give significant improvements to Health and Safety. Ampreg 21 is Germanischer Lloyds approved for certified applications.

Resin / Hardener Pack	Order Code
3.6 kg Pack (2.7 kg Resin / 0.9 kg Fast Hardener)	F121-011
3.6 kg Pack (2.7 kg Resin / 0.9 kg Standard Hardener)	F121-012
3.6 kg Pack (2.7 kg Resin / 0.9 kg Slow Hardener)	F121-013
3.6 kg Pack (2.7 kg Resin / 0.9 kg Extra Slow Hardener)	F121-014

Resin Size	Order Code		Hardener Size*	Order Code
10 kg Resin	F121-034		3.33 kg Fast	F121-035
			3.33 kg Standard	F121-036
			3.33 kg Slow	F121-037
20 kg Resin	F121-002		6.66 kg Fast	F121-004
			6.66 kg Standard	F121-006
			6.66 kg Slow	F121-008
			6.66 kg Extra Slow	F121-010
216 kg Resin	**F121-015**	*	18 kg Fast	F121-017
4 x 18kg Ampreg 21 Hardener required for 216kg resin drum			18 kg Standard	F121-018
			18 kg Slow	F121-019
** Part of the Essentials Stock Range*			18 kg Extra Slow	F121-020
1000 kg Resin	F121-016		165 kg Fast	F121-021
2 x 165kg Ampreg 21 Hardener required for 1000kg resin IBC			165 kg Standard	F121-022
			165 kg Slow	F121-023
			165 kg Extra Slow	F121-024

Laminating Systems

Ampreg F230-1

Three-part Foaming Epoxy System (resin to hardener mix ratio 100:23:1.3* by weight)

Foam expands approximately 4x by volume to create a foam of 220-250kg/m^2. Exact foaming density depends on moulding restraints and temperature. Please note that foaming agent is supplied along with the hardener.

Resin Size	Order Code
14.5 kg Resin	F113-007

Hardener Size	Order Code
3.53 kg Slow	F113-008
3.53 kg Extra Slow	F113-009

(Hardener pack consists of 3.33 kg hardener with 0.2 kg foaming agent and 10cc syringe). Larger hardener packs available, contact your local customer support representative for more information.

Laminating Systems

Ampreg 22

Epoxy Laminating System (resin to hardener mix ratio 100:28 by weight)

Ampreg 22 is an established and widely used laminating system. It is intended for both wet lay-up and vacuum bagging processes. The long working time and low exotherm of Ampreg 22 make it ideal for manufacturing large, high performance composite structures. Ampreg 22 is both Germanischer Lloyds and Lloyds approved for certified applications.

Resin / Hardener Pack	Order Code
4.23 kg Pack (3.3 kg Resin / 0.93 kg Fast Hardener)	F118-020
4.23 kg Pack (3.3 kg Resin / 0.93 kg Standard Hardener)	F118-048
4.23 kg Pack (3.3 kg Resin / 0.93 kg Slow Hardener)	F118-037

Resin Size	Order Code
20 kg Resin	F118-061

Hardener Size	Order Code
5.6 kg Fast	F118-073
5.6 kg Standard	F118-074
5.6 kg Slow	F118-075
5.6 kg Extra Slow	F118-076

Resin Size	Order Code	
193 kg Resin	**F118-063**	*
3 x 18kg Ampreg 22 hardener required for 193kg drum of resin		

Hardener Size	Order Code	
18 kg Fast	F118-062	
18 kg Standard	F118-066	
18 kg Slow	F118-065	
18 kg Extra Slow	F118-064	
18 kg High Tg	F124-002	

Resin Size	Order Code	
1000 kg Resin	**F118-009**	*
280kg Ampreg 22 hardener required for 1000kg IBC of resin		

Hardener Size	Order Code	
180.0 kg Fast	F118-018	
180.0 kg Standard	F118-042	
180.0 kg Slow	**F118-036**	*
180.0 kg Extra Slow	**F118-019**	*
180 kg High Tg	F124-001	
900 kg Extra Slow	F118-031	#
900 kg Slow	F118-051	#

* Part of the Essentials Stock Range

900kg hardeners in IBC's are made to order

Laminating Systems

Ampreg 26

Epoxy Laminating System (resin to hardener mix ratio 100:33 by weight)

Ampreg 26 is a premium epoxy laminating system, and is particularly suitable for the manufacture of large, high performance composite structures. The product's high laminate mechanical properties and high Tg's, achievable from modest postcures, make it well suited for heavily loaded applications.

Product Availability in Drums

Resin Size	Order Code
20 kg Resin	F116-035

Hardener Size	Order Code
6.66 kg Fast	F116-039
6.66 kg Slow	F116-040

Resin Size	Order Code
216 kg Resin	F116-036

4 x 18kg of Ampreg 26 hardener required for 216kg resin

Hardener Size	Order Code
18 kg Fast	F116-037
18 kg Slow	F116-038
18 kg Ultra Slow	F117-205

1000 kg Resin	F116-010

333kg of Ampreg 26 hardener required for 1000kg resin

180.0 kg Slow	F116-030

Ampreg Thixotropic Pregel

Resin Additive

Ampreg Thixotropic Pregel is a resin additive with a grease-like consistency, which can be used with a variety of hardeners from the Gurit laminating resin range. It is used primarily as a thixotrope - to be added to low viscosity laminating resins for applications where resin drainage is a concern. It is therefore typically used in vertical and overhead laminating situations, particularly where heavy, open weave fabrics are being used, since these are the most prone to resin drainage.

Resin Size	Order Code
20 kg Resin	F120-008
193 kg Resin	F120-009

Laminating Systems

Ampreg Adhesion Promoter

Modified Epoxy Resin System

Ampreg Adhesion Promoter is a unique resin system formulated to promote the adhesion between epoxy and vinylester resin. This allows it to be used with existing polyester gelcoats with higher performance epoxy resins supplied by Gurit.

Product Availability in Drums

Resin / Hardener Pack	Order Code
20 kg Ampreg Adhesion Promoter	F119-002
220 kg Ampreg Adhesion Promoter	F119-001

SP 115

Clear Epoxy Laminating System (resin to hardener mix ratio 100:33 by weight)

SP 115 is a low viscosity, ultra-clear epoxy laminating system. It has been designed for the manufacture of laminates which are to remain unpainted, and where a very clear finish is required. The material also contains blue UV filters which give the product its characteristic transparent pale violet/blue colour.

Resin / Hardener Pack	Order Code
SP 115 (Box of 5 x 0.75 kg Resin and 5 x 0.25 kg hardener)	F110-017
SP 115 5.0 kg Pack (3.75 kg Resin / 1.25 kg Hardener)	F110-020

Resin Size	Order Code
20 kg Resin	F110-023
198 kg Resin	F110-024

Hardener Size	Order Code
6.66 kg Hardener	F110-026
16.5 kg Hardener	F110-025

4 x 16.5 kg Hardener required for 198 kg Resin

Larger sizes are possible, please contact customer support for further information

Infusion Systems

Comparison of Infusion Systems

System	Description	Hardener	500g Pot Life (20°C)	Mix Ratio by weight	Intended Application
PRIME™ 20LV	Low fume, long working time vacuum infusion system	Fast	28 mins	100:26	Series build glass components - large size
		Slow	1 hr 15 mins	100:26	
		Extra Slow	6 hrs	100:26	
		High Tg	3 hrs 20 mins	100:24	
PRIME™ 27	Low viscosity, good mechanical properties, very low exotherm in thick sections	Fast	20 mins	100:28	Suitable for the female moulding of large complex components
		Slow	1 hr	100:28	
		Extra Slow	4 hrs	100:28	
		High Tg	3 hrs 20 mins	100:25	

For more detailed product information please refer to the product datasheets on www.gurit.com

Infusion Systems

PRIME™ 20LV

Epoxy Infusion System (resin to hardener mix ratio 100:26 by weight)

PRIME™ 20LV is the next generation of PRIME™ 20 epoxy infusion resin, specifically designed for use in a variety of resin infusion processes including RTM, SCRIMP™ and RIFT. It has a very low mixed viscosity and long working time, allowing large parts with complex reinforcements to be infused successfully in one operation. It has an exceptionally low exotherm characteristic, which allows thick sections to be manufactured without risk of premature gelation due to exothermic temperature rises. PRIME™ 20LV is both Germanischer Lloyds and Lloyds approved for certified applications.

Product Availability in Drums

PRIME™ 20LV Resin	Order Code
20 kg Resin	F160-049

Resin Size	Order Code
220 kg Resin	F160-034

Resin Size	Order Code
1000 kg Resin	F160-037

3 x 17.6kg required to match 220kg resin

PRIME™ Hardener Size	Order Code	
5.2 kg Fast	F160-053	
5.2 kg Slow	F160-054	
5.2 kg Extra Slow	F160-055	
19 kg Fast	F160-068	
19 kg Slow	F160-069	
19 kg Extra Slow	F160-070	
17.6 kg High Tg	F160-088	*
180 kg Fast	F160-018	
180 kg Slow	F160-032	
180 kg Extra Slow	F160-028	
178 kg High Tg	F160-089	
900 kg Slow	F160-045	
900 kg Extra Slow	F160-033	

Infusion Systems

PRIME™ 27

Ultra Low Viscosity Epoxy Infusion System (resin to hardener mix ratio 100:28 by weight)

PRIME™ 27 is Gurits premium epoxy infusion system yielding laminates of excellent mechanical and thermal performance. Like PRIME™ 20LV it is designed for use in a variety of resin infusion processes including RTM, SCRIMP™ and RIFT. PRIME™ 27 has the lowest mixed viscosity and the longest working time of Gurits range of infusion products. It is particularly suitable for infusing large complex structures that utilise a variety of reinforcing fibres, such as carbon and aramid. PRIME™ 27 uses the same hardeners as PRIME™ 20LV - just at a different ratio of 100:28 rather than 100:26. PRIME™ 27 is Germanischer Lloyds approved for certified applications.

PRIME™ 27 Resin Size	Order Code	PRIME™ Hardener Size	Order Code
18.6 kg Resin	F160-057	5.2 kg Fast	F160-053
		5.2 kg Slow	F160-054
		5.2 kg Extra Slow	F160-055
214 kg Resin	F160-041	19 kg Fast	F160-068
		19 kg Slow	F160-069
		19 kg Extra Slow	F160-070
1000 kg Resin	F160-043	180 kg Fast	F160-018
		180 kg Slow	F160-032
		180 kg Extra Slow	F160-028
		900 kg Slow	F160-045
		900 kg Extra Slow	F160-033

PRIME™ 180

High Tg Resin RTM System

PRIME™ 180 is a two-component toughened epoxy system formulated for RTM processes for manufacturing high quality structural carbon components. PRIME™ 180 has a low mixed viscosity at room temperature and versatile curing, this allows for low temperature injection which can then be followed by curing at temperatures above 90°C. The resin has low viscosity for a long period at low temperatures which allows complex or thick section laminates to be manufactured.

PRIME™ 180 Resin Size	Order Code	PRIME™ Hardener Size	Order Code
20 kg Resin	F168-001	20 kg Hardener	F168-003
200 kg Resin	F168-002	200 kg Hardener	F168-004

Adhesives

Comparison of Adhesives

* M = Moderate, D = Difficult, E = Easy

	Description	Hardener (Colour)	Mix Ratio	Hand Mix*	Working Time	Clamp time	Sag	Max Temp
Spabond 340LV	High strength, rubber toughened, fast dispense. Uses: Industrial, wind energy and marine.	Fast (Red)	2:1 (by vol)	M	20 - 40 mins	2 - 5 hrs	20 - 25mm	68°C
		Slow (Purple)			1 - 2 hrs	10 - 20 hrs		
		Extra Slow (Blue)			2.5 - 6 hrs	15 - 35 hrs		
Spabond 345	Highly sag resistent. Uses: highest performance marine projects	Fast (Black)	2:1 (by vol)	D	20 - 40 mins	3 - 8 hrs	15 - 30mm	75°C
		Slow (Red)			2 - 3 hrs	7 - 16 hrs		85°C
		Extra Slow (Blue)			3 - 6 hrs	10 - 25 hrs		80°C
Spabond 540	High elongation, long bonding times.	Fast (Red)	1:1 (by vol)	M	30 - 40 mins	2 - 5 hrs	20 - 30mm	56°C
		Std (Purple)			1 - 2 hrs	10 - 20 mins		58°C
		Slow (Green)			3 - 6 hrs	20 - 30 mins		52°C
		Extra Slow (Blue)			6hrs 30mins	TBC		TBC
Spabond 370	Easy mixing/smooth spreading. Bonds all woods		1:1 (by vol)	M	90 mins	10 - 15 hrs	10 - 20mm	55°C
Spabond 5-Minute	Tacking and secondary bonding.		1:1 (by vol)	E	90 secs	15 mins	10 - 15mm	55°C
Spabond 730	High strength, rapid curing. General purpose adhesive.		1:1 (by vol)	E	3 - 5 mins	30 mins	10-15mm	60°C

Adhesives

Spabond 340LV

Epoxy Adhesive System (mix ratio 2:1 by weight and volume)

Spabond 340LV is a lower viscosity variant of Spabond 340. It has been designed for mixing/dispensing from cartridges and to provide higher dispense rates from mixing machines. This product is ideal for bondline thicknesses up to 20mm. Spabond 340LV is Germanischer Lloyds approved for certified applications.

Dual Cartridge

900ml Dual Cartridge	Resin / Hardener Size	Order Code
Box of 10 x 900ml dual cartridge	600ml Resin / 300ml Fast Hardener	F645-042
Box of 10 x 900ml dual cartridge	600ml Resin / 300ml Slow Hardener	F645-041
Box of 10 x 900ml dual cartridge	600ml Resin / 300ml Extra Slow Hardener	F645-043

400ml Dual Cartridge	Resin / Hardener	Order Code
Box of 20 x 400ml dual cartridge	266ml Resin / 134ml Fast Hardener	F645-033
Box of 20 x 400ml dual cartridge	266ml Resin / 134ml Slow Hardener	F645-034

Dispense Guns

900ml Dispense Guns	Order Code
PC Cox Gun, PPA 600A pneumatic, 900ml 2:1	K215-039

400ml Dispense Guns	Order Code
Metix Gun DM400-01 Manual, 400ml	K215-021
Metix Gun DM400-85-01 Pneumatic, 400ml	K215-022

Mix Heads

900ml Mix Heads	Order Code
Box of 20 x 16mm, 20 Element round mix head with screw connection	A640-021
Box of 20 x 13mm, 18 Element round mix head with bell inlet	A640-009

400ml Mix Heads	Order Code
Box of 20 x 10.7mm 20 Element	A640-022

Adhesives

Spabond 340LV - Continued

Product Availability in Drums

Resin Size	Order Code		Hardener Size	Order Code	
20 kg Resin	**F645-053**	*	**10 kg Fast**	**F645-051**	*
			10 kg Std	F645-064	
			10 kg Slow	**F645-052**	*
			10 kg Extra Slow	F645-057	
200 kg Resin	**F645-049**	*	200 kg Fast	F645-050	
			200 kg Slow	F645-025	
			200 kg Extra Slow	F645-029	

* = part of the Essentials Stock range

Adhesives

Spabond 345

Epoxy Adhesive System (mix ratio 2:1 by volume)

Spabond 345 is a toughened high performance, adhesive system ideal for bonding large structures where substrate surfaces have uneven geometry. The product has a thick, paste-like consistency, and can be applied without sag in thicknesses of over 30mm at 15°C, making it ideal where large, uneven vertical gluelines are required. Spabond 345 has both higher thermal and higher mechanical properties than the other systems. Spabond 345/Fast Black has been formulated for carbon structures requiring an aesthetic finish.

400ml Dual Cartridge	Resin / Hardener Size	Order Code
Box of 20 x 400ml dual cartridges	266ml Resin / 134ml Fast Hardener	F646-016
Box of 20 x 400ml dual cartridges	266ml Resin / 134ml Fast Black Hardener	F646-024
Box of 20 x 400ml dual cartridges	266ml Resin / 134ml Slow Hardener	F646-014

Dispense Guns

400ml Dispense Guns	Order Code
Metix Gun DM400-01 Manual, 400ml	K215-021
Metix Gun DM400-85-01 Pneumatic, 400ml	K215-022

Mix Heads

400ml Mix Heads	Order Code
Box of 20 x 10.7mm 20 Element	A640-022

Product Availability in Drums

Resin Size	Order Code		Hardener Size	Order Code
20 kg Resin	**F646-038** *	*	**9.6 kg Fast**	**F646-041**
		*	**9.6 kg Fast Black**	**F646-042**
		*	**9.6 kg Slow**	**F646-043**
			9.6 kg Extra Slow	F646-044

* = part of the Essentials Stock range

Adhesives

Spabond 368

Corebond Epoxy Adhesive (mix ratio 2:1 by volume)

Spabond 368 is a DNV approved corebond epoxy adhesive. It is a low density adhesive, with a simple 2:1 by volume mix ratio which is designed for bonding a wide range of core materials. The product has very good application characteristics and can be applied in thicknesses of up to 15mm at 20°C on vertical surfaces without the risk of drainage.

Product Availability in Drums

Resin Size	Order Code		Hardener Size	Order Code	
10 kg Resin	F654-021		4.4 kg Extra Slow Hardener	F654-022	
17.5 kg Resin	**F654-023**	*	**7.7 kg Extra Slow Hardener**	**F654-024**	*

* = part of the Essentials Stock range

Spabond 370

Epoxy Adhesive System (mix ratio 1:1 by weight and volume)

Spabond 370 epoxy adhesive has a simple 1:1 mix ratio, by weight and by volume, epoxy adhesive. Thicknesses of up to 20mm at 20°C can be applied on vertical surfaces without drainage. Spabond 370 is designed for use and cure at temperatures of 10-30°C making it suitable for use in covered outdoor applications, and its non-corrosive nature also makes it safer to use. Whilst being a good general purpose adhesive it is also especially well suited for bonding wooden substrates.

Product Availability in Drums

Resin Size	Order Code		Hardener Size	Order Code	
5 kg Resin	F640-019		5 kg Std Hardener	F640-020	
20 kg Resin	**F640-021**	*	* **20 kg Std Hardener**	**F640-022**	

* = part of the Essentials Stock range

Adhesives

Spabond 540

Modified Epoxy Adhesive System (mix ratio 1:1 by volume)

Spabond 540 is a modified ambient curing epoxy adhesive designed for bonding polyester or epoxy laminates. The adhesive system is available with two resins; Spabond 540 resin is designed for larger gaps up to 30mm and Spabond 540LV is a lower viscosity resin designed for thinner bondlines, <20mm. The high toughness and excellent gap filling properties make this adhesive ideal for stringers/bulkheads, frames and hull-to-deck joints on medium to large production boats.

Dual Cartridge

600ml Dual Cartridge	Resin / Hardener	Order Code
Box of 12 x 600ml dual cartridge	300ml Resin / 300ml Fast Hardener	F648-044
Box of 12 x 600ml dual cartridge	300ml Resin / 300ml Std Hardener	F648-045

Resin Size	Order Code
20 kg Spabond 540 Resin	F648-041
20 kg Spabond 540LV Resin	F648-013

Hardener Size	Order Code
18.4 kg Fast	F648-010
18.4 kg Std	F648-022
18.4 kg Slow	F648-030
18.4 kg Extra Slow	F648-048

Dispense Guns

600ml Dispense Guns	Order Code
PC Cox Gun, PPA 300A pneumatic, 600ml 1:1	K215-050

Mix Heads

600ml Mix Heads	Order Code
Box of 20 x 10.7mm, 19 Element square mix head with screw connection	A640-019

Adhesives

Spabond 5-Minute Adhesive

Rapid Cure Epoxy Adhesive (mix ratio 1:1 by weight and volume)

Spabond 5-Minute adhesive uses Gurits' fast-setting technology. It combines rapid bonding speed (bonds in 5 minutes, full handling strength in 15-20 minutes) with a simple 1:1 by weight and by volume mix ratio. Spabond 5-Minute is an ideal ‘spot-weld’ adhesive but it is not suitable for applications where a structural adhesive is required.

Description	Order Code
Box of 20 x 310ml Resin cartridge (un-pigmented)	F652-025
Box of 20 x 310ml Hardener cartridge (un-pigmented)	F652-027
Box 20x400ml 2 component cartridge (pigmented) 200ml Resin / 200ml Hardener	F652-021

Spabond 730 Adhesive

Rapid Structural Adhesive (mix ratio 1:1 by weight and volume)

Spabond 730 is a rapid setting structural epoxy adhesive. It gels in 10 minutes and has full handling strength after 2 hours. Optimum properties for this adhesive are achieved after an overnight cure at ambient.

Description	Order Code
Box 20x400ml 2 component cartridge (pigmented) 200ml Resin / 200ml Hardener	F650-007

Dispense Guns for Spabond 5 Minute and 730 Adhesives

400ml Dual Cartridge Dispense Guns	Order Code
Metix Gun DM400-01 Manual, 400ml	K215-021
Metix Gun DM400-85-01 Pneumatic, 400ml	K215-022

Mix Heads for Spabond 5 Minute and 730 Adhesives

Mix Heads not available for 310ml single component cartridges	Order Code
Box of 20 x 10.7mm, 19 Element square mix head with screw connection	A640-019

Filling and Fairing

S-Fair 600

Epoxy Fairing System (mix ratio 1:1 by volume, 100:64 by weight)

S-Fair 600 is a simple 1:1 by volume, two component filler designed for filling and fairing large composite and metal structures such as hulls and decks. It can be applied up to a thickness of 35mm on a vertical surface. It is easy to sand and is compatible with a wide range of primers and top coats typically used in the marine market for the finishing of yachts. It is available with two hardeners; Fast and Standard, which enables the customer to tailor the working/cure time to the ambient workshop temperature.

Resin Size	Order Code		Hardener Size	Order Code	
2.5L Resin	F920-001		2.5L Fast	F920-111	
			2.5L Std	F920-002	
10L Resin	**F920-003**	*	10L Fast	F920-110	
			10L Std	**F920-004**	*
190L Resin	F920-107		190L Fast	F920-109	
			190L Std	F920-108	

* = part of the Essentials Stock range

Coatings

SP 320

Solvent-Free Clear Epoxy Coating System (mix ratio 100:33 by weight)

SP 320 is a solvent-free, clear epoxy coating that provides a high clarity, tough finish to whatever it is applied to. When used for coating wood, just a few coats will provide a depth of clarity that can only otherwise be achieved with many more coats of a conventional varnish. The epoxy coating will protect most surfaces from moisture ingress, and will also add strength to softwood surfaces.

Resin / Hardener Packs	Order Code
5 x 1 kg Pack (0.75 kg Resin / 0.25 kg Fast Hardener)	F505-024
5 x 1 kg Pack (0.75 kg Resin / 0.25 kg Slow Hardener)	F505-025
4.0 kg Pack (3.0 kg Resin / 1.0 kg Fast Hardener)	F505-028
4.0 kg Pack (3.0 kg Resin / 1.0 kg Slow Hardener)	F505-029

Product Availability in Drums

Resin Size	Order Code
20.0 kg Resin	F505-035

Hardener Size	Order Code
6.66 kg Fast	F505-038
6.66 kg Slow	F505-039

Gurit Pump Sets

Quantity	Description	Order Code
1 pair	Minipump pair any 1kg pack plastic	K216-318
1 pair	SP 320 Pump Set / 1kg pack (14ml dispense)	K216-313
1 pair	SP 320 Pump Set / 4kg pack (14ml dispense)	K216-314
1 pair	SP 320 Pump Set / 13.33 & 26.66 kg size (35ml dispense)	K216-312

Coatings

Eposeal 300 (SP 300)

Universal Epoxy Primer (mix ratio 1:1 by volume)

Eposeal 300 is a solvent-based, low viscosity epoxy primer. It has been developed primarily for use on wood but can also be used on other materials such as GRP, stone, ferrocement, brick, etc. Eposeal 300 has an extremely low viscosity which ensures that the product achieves rapid and deep penetration of porous surfaces.

Resin / Hardener Packs	Order Code
5 x 1 litre Pack (0.5 litre Resin / 0.5 litre Hardener) SP 300	F705-013
5.0 litre Pack (2.5 litre Resin / 2.5 litre Hardener) SP 300	F705-012

SP106 R/H FAST 50x1KG (10 BOXES OF 5) 0.85Kg Resin: 0.15Kg Hardener in a blister pack

Multi-Purpose Systems

SP 106

Multi-purpose Epoxy System (mix ratio 5:1 by volume)

SP 106 is a simple to use, all-purpose epoxy which can be used unmodified as a protective primer, coating or laminating system. When modified with Gurit filler powders (see Ancillary Products) it can be used as an adhesive or filler system. Its various hardeners provide a range of working times and the Extra Slow hardener can also be used in hot or tropical conditions. SP 106 has been established for over 20 years as the primary epoxy system for a variety of woodworking applications.

Resin / Hardener Pack	Order Code
5 x 1KG (1 Box of 5) 0.85Kg Resin: 0.15Kg **FAST** Hardener in a blister pack	F510-037
5 x 1KG (1 Box of 5) 0.85Kg Resin: 0.15Kg **SLOW** Hardener in a blister pack	F510-038
3.02 kg Pack (2.56 kg Resin / 0.46 kg Fast Hardener)	F510-041
3.02 kg Pack (2.56 kg Resin / 0.46 kg Slow Hardener)	F510-042

Resin Size	Order Code	Hardener Size	Order Code	
10 kg Resin	F510-004	1.8 kg Fast (0.9 kg x 2)	F510-019	
		1.8 kg Slow (0.9 kg x 2)	F510-031	
20 kg Resin	F510-051	3.6 kg Fast	F510-018	
		3.6 kg Slow	F510-053	
216 kg Resin	F510-008	19.5 kg Fast	F510-020	
		19.5 kg Slow	F510-032	
1000 kg Resin	F510-034	180 kg Slow	F510-033	*

* Due to manufacturing restrictions lead times can vary. Please contact customer support for confirmation of availability.

Multi-Purpose Systems

SP 106 - Continued

Gurit Pump Sets

Quantity	Description	Order Code
1 pair	SP 106 Pump Set/12ml dispense (1kg pack)	K216-315
1 pair	SP 106 Pump Set/12ml dispense (3kg pack)	K216-316
1 pair	SP 106 Pump Set/30ml dispense (11.8kg pack)	K216-317
1 pair	SP 106 Pump Set / 30ml dispense (23.6 kg size)	K216-310

Handipack

Multi-purpose Epoxy System (mix ratio 2:1 by volume)

Handipack is a multi-purpose epoxy, supplied in a small pack designed for quick repair work and other small tasks. It has a simple 2:1 mix ratio and dispensing is made easy since pumps are supplied in the pack. Used as a coating, it cures rapidly to form a tough, clear film, with good moisture resistance. By adding the appropriate Gurit filler powder, adhesives and fillers can also be made. The medium-to-low viscosity of the material enables it to be used for small laminating tasks, using lightweight glass fabrics, such as those from the Gurit reinforcements range.

Resin / Hardener Packs	Order Code
H/PACK R/H+PUMPS, 5 UNITS (1 BOX OF 5)	F520-011

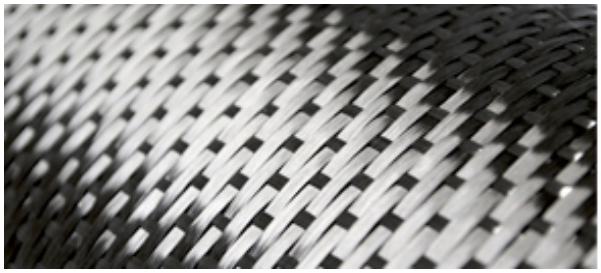
Each 375 ml (250ml Resin: 125ml Hardener in a blister pack with pumps)

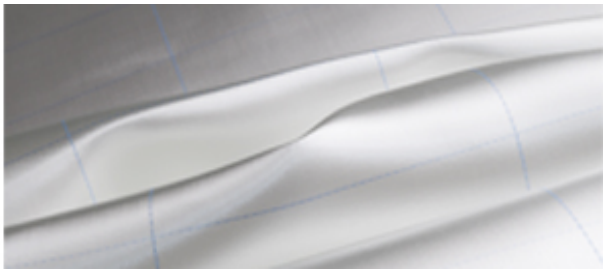
Epoxy Repair Kit

A handy self contained kit which contains all of the material required to carry out a full range of quick structural and sealing repairs on GRP, wood or steel boats. The kit comprises of 250ml Handipack Resin, 125ml Handipack Hardener, 2 calibrated mixing pots, 1 pot of Colloidal Silica, 1 pot of Microballoons, 1 pot of Microfibres, 2 glue brushes, 2 mixing sticks, 2 pairs of latex gloves and 1 metre of glass tape.

Description	Order Code
First aid for boats kit	A606-001

Reinforcement Materials





Gurit supplies an extensive range of reinforcements suitable for composite component manufacture and repair. These materials are based on the most widely used fibre types and fibre orientations and incorporate a variety of construction techniques in their manufacture.

Our range of Reinforcements is presented by fibre type:

i) Glass Products – E Glass

ii) Carbon Products

iii) Hybrid combinations of the above fibres

And sub-divided into the following categories, based on the orientations of the primary structural

i) Unidirectional Fabrics – A variety of construction styles with all structural fibres running at 0° where optimum mechanical properties or local reinforcement is required. The Style is generally Unitex (‘UT’) which offers a balance of handling properties.

ii) Woven Fabrics – A wide range of woven fabrics, available in plain, twill and satin weave formations with fibres at 0°/90°.

iii) Multiaxial Fabrics – Stitched construction with fibres at +/-45° or 0°/90° (Double Bias), 0°/+45°/45° (Triaxial) and 0°/+45°/-45°/90° (Quadraxial). These products offer excellent mechanical properties, and have optimised fibre spread for high laminate quality.

iv) Tapes – Narrow (< 200mm) fabric versions of the above:

Gurit also supply shears to meet the specific requirements of cutting fibre types.

Reinforcement Materials

Availability

The supply of dry reinforcements is subject to a minimum single roll quantity per style for most items. Smaller quantities of fabric are available from Gurits' network of distributors, subject to cutting and handling charges.

This catalogue describes Gurits standard range of reinforcement materials. If your preferred reinforcement is not listed in the following pages, please contact Gurit, as we can offer alternative weaves, weights, fibres and fibre combinations in any style. Non-standard items may be subject to limited availability. Width availability may change from time to time.

For further information, confirmation of stock levels and technical advice on Gurits reinforcement materials - please contact your local Customer Support Team.

Reinforcement Nomenclature

1st Letter: General Construction of Reinforcement Fabric

WR = Woven rovings - (glass)

R = Woven fabric - yarn (glass) or tows (carbon)

X = Double bias (±45°) stitched fabric

Q = Quadraxial (0°/90°/±45°) stitched fabric

Y = Triaxial (0°/±45°) stitched fabric

UT = Unitex woven low-crimp unidirectional fabric

UF = Unifibre non-woven unidirectional fabric

2nd Letter: Fibre Type (or Major Component in Hybrid)

E = E glass

S = S glass (or R glass)

C = Carbon

3rd letter: 2nd Fibre Type - Minor Component in Hybrid (as above);

also: (when present) T = Tape version

Reinforcement Materials

Following the letters are 2, 3 or 4 digits which provide an indication of area weight in g/m2. (Please note that the number shown in the fibre style is not the exact weight in grammes.)

Final digit: Identifier to distinguish otherwise similar fabrics.

Suffix letter: For woven fabrics, the following suffixes indicate the weave:

P = Plain

T = 2x2 twill

S = 3x1 twill

T4 = 4x4 twill

Hx = Satin (where x = harness number)

C = Crowsfoot

B = Basket

Q = Quadran

Example: UT-C300/500

UD carbon in Unitex

Nominal weight 300g/m^2

Width 500mm

EXPORT CONTROL RESTRICTIONS

Please be advised that for shipments of dry carbon outside of the European Union, an Export Licence will be required.

***** Essentials Stock item

Reinforcement Materials

E-Glass Products

Uni-directional Reinforcement Fabrics

Please be advised that these materials may be subject to a minimum order quantity of greater than one roll. Please contact your Customer Support Representative for details.

Style	Width (mm)	Unit	Roll (m²)	Order Code
UT-E250	500	sqm	100	R161-015
UT-E500	500	sqm	50	R161-021

0/90° Woven Yarn

RE86P	**1050**	**sqm**	**105 ***	**R111-008**
RE165T	**1270**	**sqm**	**133.35 ***	**R111-203**
RE210D	**1300**	**sqm**	**137.8 ***	**R111-120**
RE295H4	**1240**	**sqm**	**130 ***	**R111-113**
RE301H8D	1270	sqm	127	R111-117
RE400T	1250	sqm	133	R111-197

0/90° Woven Roving Yarn

WRE581T	**1250**	**sqm**	**62.5 ***	**R111-116**

+45° Double Bias Stitched Fabrics

XE304	1270	sqm	127	R121-190
XE451	**1270**	**sqm**	**107.95 ***	**R121-187**
XE603	**1255**	**sqm**	**62.75 ***	**R121-014**
XE905	1270	sqm	50.8	R121-018

0/90/±45° Quadraxial Stitched Fabrics

QE624	1270	sqm	76.2	R121-151
QE1174	1270	sqm	44.4	R121-153

* Essentials Stock Range

Reinforcement Materials

E-Glass Products

0/90° Woven Tapes

Typical uses for these tapes are in the reinforcement of the joint lines of thin, light panels bonded at their edges and the wrapping of tubular structures.

Style	Width (mm)	Unit	Order Code
RET160	50	50 lm roll	R111-053
RET160	100	50 lm roll	R111-055

±45° E-Glass Tapes

Stitched type in E-glass. Typical uses for these tapes are in the reinforcement of the joint lines of thick, heavy panels bonded at their edges.

Style	Width (mm)	Unit	Order Code
XET300/125 BIAX EGL TAPE	125	50 lm roll	R121-056
XET601/140 BIAX EGL TAPE	140	50 lm roll	R121-060

Infusion Materials

Gurit can offer a range of reinforcements that are optimised for infusion, by allowing greater resin penetration.

Some of the options available are listed below, but if you should have a particular requirement for a fabric which is not listed, then please contact your Customer Support or Sales Representative who can provide further information on other material options.

Unidirectional Fabric

Style	Width (mm)	Unit	Roll (m²)	Order Code
UT-C300	500-i	sqm	62.5	R163-110
UT-C400	500-i	sqm	62.5	R163-111

0/90° Biaxial Fabric is available on request

Reinforcement Materials

Carbon Products - subject to Export Control Legislation

These products may be produced with either HSC or HEC carbon fibres.

Unidirectional Reinforcement Fabrics

Please be advised that these materials may be subject to a minimum order quantity of greater than one roll. Please contact your Customer Support Representative for details.

Style	Width (mm)	Unit	Roll (m²)	Order Code
UT-C200	500	sqm	75	R163-039
UT-C300	**500**	**sqm**	**62.5 ***	**R163-040**
UT-C400	500	sqm	50	R163-043

0/90° Woven Reinforcements

Gurit reserve the right to interchange 1000mm and 1270mm alternatives without prior notice.

Style	Width (mm)	Unit	Roll (m²)	Order Code
RC200T	**1270**	**sqm**	**127 ***	**R113-134**
RC203P (powder coated)	**1270**	**sqm**	**133.35 ***	**R113-114**
RC303T	**1270**	**sqm**	**133.35 ***	**R113-128**
RC416T	**1270**	**sqm**	**63.5 ***	**R113-083**
RC660T	1270	sqm	63.5	R113-127

+ 45° Double Bias Stitched Fabrics

Style	Width (mm)	Unit	Roll (m²)	Order Code
XC302	**1270**	**sqm**	**127 ***	**R123-060**
XC411	**1270**	**sqm**	**127 ***	**R123-006**
XC611	1270	sqm	63.5	R123-068

* Essentials Stock Range

Additions and changes to our Reinforcements range may be made at any time. Please refer to our website (www.gurit.com), or contact your Customer Support Representative for latest information. Certain products may have a minimum order quantity - this will be communicated by the Customer Support team.

Reinforcement Materials

Carbon Products - continued

Unidirectional Reinforcement Tapes

Non-crimp plain weave type (Unix) in carbon. Typical uses for these tapes are in the local reinforcement of predominantly glass composite structures, where the load paths are known.

Style	Width (mm)	Unit	Order Code
RUCT500P	100	50 lm roll	R163-057

±45° Double Bias Stitched Tapes

Stitched type in carbon. Typical uses for this tape is in the reinforcement of the joint lines of thick, heavy panels bonded at their edges. Woven from HEC fibres.

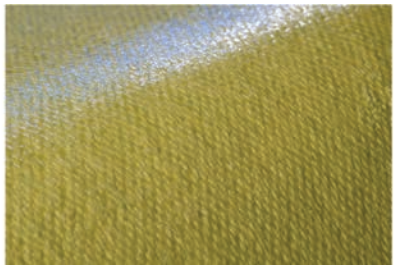
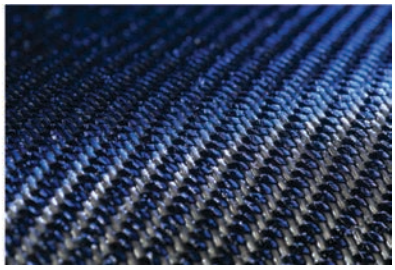
Style	Width (mm)	Unit	Order Code
XCT411	120	50 lm roll	R123-017

This product has a minimum order quantity of 9 rolls

Additions and changes to our Reinforcements range may be made at any time. Please refer to our website (www.gurit.com), or contact your Customer Support Representative for latest information.

NB. If you require any products which are not featured in the Product Catalogue, please contact your Customer Support or Sales Representative. Additions and changes to our Reinforcements range may be made at any time. Please refer to our website (www.gurit.com), or contact your Customer Support Representative for latest information.

Prepreg Materials

Pre-impregnated materials (prepregs) are reinforcement fibres or fabrics into which a pre-catalysed resin system has been impregnated by a machine. The resin systems in these materials react only very slowly at room temperature, giving rise to working times of many days to several months. The prepreg resins can only be fully cured by heating them to the prescribed cure temperature. The accuracy of the machinery used to combine the fabric or fibre with the resin system ensures that laminates produced from prepregs have more consistent and higher fibre contents than can be achieved by wet lay-up techniques. Furthermore, this technology allows the use of very tough and strong resin systems that would be too high in viscosity to be impregnated by hand.

A range of Gurit prepregs use the latest solvent-free, hot-melt technology. This combines the prepreg resin system with the reinforcement using heat to reduce resin viscosity and pressure to assist resin impregnation. Besides producing a volatile-free product, the solvent-free nature of this process is far more environmentally acceptable than the more traditional ‘solvent tower’ process. Every prepreg product produced by Gurit is monitored on-line with sophisticated measuring equipment. This gives the products their highly accurate and consistent resin contents.

Although it is theoretically possible to produce an almost infinite number of resin and reinforcement permutations, wherever possible Gurit produces prepregs from a defined selection to ensure that each product provides the best combination of performance and cost. These standard items are listed in this product catalogue, and enquiries for other combinations should be made to a member of the Gurit Sales Team.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

Prepreg Materials

Fibre Definitions of HSC, HEC, IMC and HMC

Fibre	Strength	Modulus
HSC	>380MPa	242 ±15GPa
HEC	>480MPa	242 ± 15GPa
IMC	>440MPa	295 ± 15GPa
HMC	>430MPa	385 ± 20GPa

Bespoke products are available for high-volume custom applications, where specific variants of width, resin content, fibre weight, tack levels and backers can be requested. For specific enquiries please contact your local customer support representative.

Product descriptions shown in the following pages are all structured according to the following systems:

Unidirectional prepregs: Resin systems and variant / fibre type (generic or mfrs. code) / fibre weight (g/sqm) / prepreg width (mm) / resin content (%) by weight (normally ±3%) / backer (normally embossed poly). Where backer is not specified it will be a single poly backer.

eg. PC53-4163 (SE84LV / HEC / 300g / 400mm / 35% / 1 poly, 1 paper

Woven and Multiaxial prepregs: Resin system and variant / Gurit reinforcement designation / prepreg width (mm) / resin content (%) by weight (normally ±3%) / backer (normally embossed poly). Where backer is not specified it will be a single poly backer.

eg. PC13-2646 (SE84LV / RC200T / 1270mm / 42% / 1 poly)

Adhesive films: Resin systems and variant / carrier (S = scrim) / total weight (g/sqm) / film width (mm) / backer (normally paper). Where backer is not specified it will be a single paper.

eg. PC11-579 (SA80 / S / 250g / 1270mm / 1 paper)

A full description of the Gurit reinforcement designation system is given in the Reinforcement section of this Product Catalogue.

Order Quantites

Gurit will endeavour to ship to a +/-10% tolereance of the target roll length.

Prepreg Essentials

Gurit prepreg essentials are the commodity prepreg materials which we manufacture in large batches and hold in stock, in order to keep pricing and lead times as low as possible.

Description	Typical Roll Length (m²)	Order Code
SA80/S/150g/1270mm ADH.FILM	63.5	PC11-666
SA80/S/250g/1270mm ADH.FILM	101.6	PC11-579
SE84LV/HEC/200/400/37±3%/POPA	80	PC53-4160
SE84LV/HEC/300/400/35+/-3%/popa	60	PC53-4163
SE84LV/HEC/450/400/35+/-3%/popa	40	PC53-4159
SE84LV/NPP80/1000/50+/-5%/1pa	100	PC15-1744
SE84LV/RC200T/1270/42+/-3%	63.5	PC13-2646
SE84LV/RC416T/1270/40+/-3%	31.75	PC13-2682
SE84LV/RE295/1240/39+/-3%	62	PC11-4005
SE84LV/XC305/1270/41+/-3%	63.5	PC23-4362
SE84LV/XC411/1270/40+/-3%	50.8	PC23-1738
SF80/S2/150g/1255mm	62.75	SC11-2829

SC110 Essentials

Description	Typical Roll Length (m²)	Order Code
SC110(T2)/RC200T/1270/40+/-3%/2DPE	63.5	PA13-6423
SC110(T2)/RC245T/1250/40+/-3%/2DPE	62.5	PA13-6425
SC110(T2)/RC380T/1250/40+/-3%/2DPE	57.5	PA13-6425

Prepreg Materials

SE 70

SE 70 is a family of hot melt, low temperature (70ºC) cure, epoxy prepreg systems. They have been developed for use in the construction of large components using low energy cure cycles, and have an outlife of 30 days at 23°C. Excellent properties can be achieved at this cure temperature, particularly compressive and interlaminar shear strengths.

Woven Carbon

Description	Typical Roll Length (m²)	Order Code
SE70/RC200T/1270/40+/-3%	63.5	PP13-3792
SE70/RC303T/1270/42%/2dpe	101.6	PP13-2823
SE70/RC660T/1270/40+/-3%	50.8	PP13-4746
SE70/RC203P/1270/42+/-3%/popa	63.5	PP13-4315

Unidirectional High Modulus Carbon (HMC)

Description	Typical Roll Length (m²)	Order Code
SE70/HMC/150/400/36%/POPA	80	PP53-5784
SE70/HMC/300/400/33%/POPA	60	PP53-5783

Unidirectional High Elongation Carbon (HEC)

Description	Typical Roll Length (m²)	Order Code
SE70/HEC/150/400/37+/-3%/2dpe	80	PP53-3204
SE70/HEC/200/400/35+/-3%/popa	80	PP53-4164
SE70/HEC/300/400/35+/-3%/popa	60	PP53-4165

Biaxial ±45 Carbon

Description	Typical Roll Length (m²)	Order Code
SE70/XC411/1270/40+/-3%	50.8	PP23-3410

Peel Ply

Description	Typical Roll Length (m²)	Order Code
SE70LV/NPP80/1000/50+/-5%/1pa	100	PP15-5724

SE 70 is available in similar formats as SE 84LV please consult the appropriate sections of this catalogue.

Prepreg Materials

SE 84LV

SE 84LV is an exceptionally versatile hot-melt, epoxy prepreg, it can be cured at temperatures as low as 80°C, or it can be used for faster moulding of components at 120°C. This is achieved with an extremely good outlife of up to 56 days at 21°C. SE 84 is a tough system, and offers excellent mechanical properties on a wide variety of reinforcing fabrics and fibres. With its high compressive strength it is widely used in large heavily loaded components, including yacht hulls, and spars.

The SE 84LV resin system is Lloyds approved. Gurit has Lloyds and GL approval for SE 84LV with some multi-axial carbon, woven carbon and carbon UD products. Please contact your customer support representative for more information.

Unidirectional High Elongation Carbon (HEC)

Description	Typical Roll Length (m²)	Order Code
SE84LV/HEC/150/400/37+/-3%/popa	80	PC53-4161
SE84LV/HEC/200/400/37+/-3%/popa	**80**	**PC53-4160** *
SE84LV/HEC/300/400/35+/-3%/popa	**60**	**PC53-4163** *
SE84LV/HEC/450/400/35+/-3%/popa	**40**	**PC53-4159** *

Unidirectional Intermediate Modulus Carbon (IMC)

Description	Typical Roll Length (m²)	Order Code
SE84LV/IMC/300/400/35%/popa	60	PC53-2306

*Part of prepreg essentials range.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

Prepreg Materials

SE 84LV - Continued

Unidirectional High Modulus Carbon (HMC)

Description	Typical Roll Length (m²)	Order Code
SE84LV/HMC/150/400/35+/-3%/popa	80	PC53-1807
SE84LV/HMC/300/400/35+/-3%/popa	60	PC53-1808
SE84LV/HMC/450/400/35%/popa	40	PC53-2305

Ultra High Modulus Carbon (UHMC)

Description	Typical Roll Length (m²)	Order Code
SE84LV/UHMC/150/400/32%/2dpe	80	PC53-5802
SE84LV/UHMC/300/400/32+/-3%/popa	60	PC53-4544

Limited availability on ultra high modulus carbon

Woven High Strength Carbon

Description	Typical Roll Length (m²)	Order Code
SE84LV/RC200T/1270/42+/-3%	**63.5**	**PC13-2646** *
SE84LV/RC203P/1270/42+/-3%/popa	63.5	PC13-4314
SE84LV/RC303T/1270/42+/-3%	50.8	PC13-2710
SE84LV/RC416T/1270/40+/-3%	**63.5**	**PC13-2682** *

Biaxial ±45 Carbon

Description	Typical Roll Length (m²)	Order Code
SE84LV/XC305/1270/41+/-3%	**63.5**	**PC23-4362** *
SE84LV/XC411/1270/40+/-3%	**50.8**	**PC23-1738** *

*Part of prepreg essentials range.

Prepreg Materials

SE 84LV - Continued

Peel Ply

Description	Typical Roll Length (m²)	Order Code
SE84LV/NPP80/1000/50+/-5%/1pa	**100**	**PC15-1744** *

Woven Glass

Description	Typical Roll Length (m²)	Order Code
SE84LV/RE165T/1270/41+/-3%	127	PC11-5754
SE84LV/RE295/1240/39+/-3%	**62**	**PC11-4005** *

Multiaxial Glass

Description	Typical Roll Length (m²)	Order Code
SE84LV/XE603/1250/36+/-3%	31.3	PC21-1747
SE84LV/XE905/1270/35+/-3%	19.1	PC21-1748

Woven and Multiaxial Aramid

Description	Typical Roll Length (m²)	Order Code
SE84LV/RA320H5/1270/46+/-3%	63.5	PC12-1752

SE 84 Nano Ultra High Compression Prepreg

SE 84 Nano is a high performance hot-melt epoxy prepreg. When pressure moulded SE 84 Nano exhibits a 25% increase in compression strength vs SE 84LV.

Description	Typical Roll Length (m²)	Order Code
SE84Nano/IMC/150/400/36±3%/2DPE	80	PC53-6735
SE84Nano/IMC/300/400/36±3%/2DPE	60	PC53-5737

*Part of prepreg essentials range.

Prepreg Materials

WE90 Structural Prepreg Range for Industrial Applications

Description	Order Code
WE91-1/EGL/1600/1000/32%+/-3%	PA51-5324
WE91-1/EGL/1200/900/32+/-3%	PA51-3984
WE91-1 80g peel ply	SA15-6090
SPRINT/600g/G/BIAX/1270mm/35%	SA41-4767

Order Quantites

Gurit will endeavour to ship to a +/-10% tolereance of the target roll length.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

Prepreg Materials

Prepreg Materials for Automotive Applications

Gurits experience in the automotive market has led to the development of a range of composite materials for the industry and its suppliers. This new range provides manufacturers with composite materials designed for a variety of applications, both structural and cosmetic. The automotive materials range has been formulated by Gurit's technical team to offer the best solution for OEMs and third-party suppliers who are looking for a composite solution to their parts manufacturing process. These materials offer class leading performance along with the recognised benefits of composites; strength, lightness and the ability to fashion complex shapes.

SC 110 Cosmetic Carbon Prepreg

SC 110 is a new cosmetic grade prepreg that utilises a high clarity, versatile, hot-melt epoxy resin formulation. The unique formulation ensures that no dicy white-wash or spots are evident in the cured resin, reducing scrap rate by up to 20%. It is ideal for manufacturing high visual quality components using autoclave, press and vacuum-only processing. It can be cured at temperatures as low as 80°C, or it can be used for faster moulding of components at 120°C. Even faster cures are achievable using press moulding technologies at temperatures up to 150°C. This is achieved whilst maintaining a good out-life of up to 3 weeks at 21°C. It is a toughened system, and offers excellent mechanical properties on a wide variety of reinforcing fabrics and fibres.

Description	Roll Length m^2	Order Code	
SC110(T2)/RC200P/1250/40%/2DPE	62.5	PA13-6404	
SC110(T2)/RC200T/1270/40+/-3%/2DPE	63.5	PA13-6423	
SC110(T2)/RC245T/1250/40%/2DPE	**62.5**	**PA13-6355**	*
SC110(T2)/RC380T/1250/40+/-3%/2DPE	**62.5**	**PA13-6425**	*
SC110(T2)/RC660T/1270/35+/-3%/2DPE	25.4	PA13-6431	

* part of the Essentials Stock range

SC 160 - High Tg Visual Carbon Prepreg

SC 160 is a visual grade prepreg that utilises a high clarity, versatile, hot-melt epoxy resin formulation. The unique formulation ensures that no white-wash or spots are evident in the cured resin. It is ideal for manufacturing high visual quality components using autoclave and press moulding. It can be cured at temperatures as low as 130°C (266°F), or it can be used for faster moulding of components at 160°C (320°F). An even faster cure of 30 minutes at 180°C (300°F) can also be achieved, whilst maintaining a good out-life of up to 3 weeks at 21°C (70°F). SC 160 is a toughened system and offers excellent mechanical properties on a wide variety of reinforcing fabrics and fibres.

SC 160 is suitable for interior and exterior automotive, marine and other markets where a high clarity finish is required in conjunction with a high Tg.

Prepreg Materials

Description	Typical Roll Length (m²)	Order Code
SC160/RC200P/1270/40+/-3%/2DPE	63.5	PA13-6444
SC160/RC200T/1270/40±3%/2DPE	57.5	PA13-6445
SC160/RC245T/1250/40±3%/2DPE	62.5	PA13-6343
SC160/RC380T/1250/40±3%/2DPE	57.5	PA13-6412
SC160/RC660T/1270/35±3%/2DPE	25.4	PA13-6451

SE 200 Structural Epoxy Prepreg

SE 200 is a high strength toughened epoxy system that has a flexible cure envelope ranging from 135°C to 200°C. SE 200 has been developed to enable rapid part manufacture through a number of composite processing methods. The minimum cure temperature is 135°C from which SE 200 develops a Tg and mechanical properties associated with higher temperature curing systems. Higher temperature cures in excess of 180°C will achieve the best dry and wet thermal performance. Using the appropriate press moulding technology it is possible to achieve a 210°C Tg after a 15 minutes hot-in / hot-out cure at 195°C, making SE 200 suitable for the economic production of automotive parts. SE 200 structural prepreg can be used in the making of parts such as structural lower tubs, bulkheads, front and rear scuttles, gearbox tunnels and other structural components.

Description		Order Code
SE200/00/200G/1270MM ADH. FILM		SA00-6141
SE200/IMC/124/400/36%/2DPE	#	PA53-6193
SE200/RC245T/1000/51%/2DPE		PA13-6201
SE200/RC245T/1250/40%/2DPE		PA13-6271
SE200/RC380T/1250/40%/2DPE		PA13-6273
SE200/RC400T/1270/40%/2DPE		PA13-6143
SE200/RCE240P/1000/51%/2DPE		PA13-6202
SE200/RCIM200T/1000/40%/2DPE	#	PA13-6275
SE200/T1000/124/400/36%/2DPE	#	PA53-6195
SE200/UHMC/124/400/36%/2DPE		PA53-6191

items are classed as Dual-use goods and may require an export licence

* part of the Essentials Stock range

Prepreg Materials

5 Minute Curing Prepreg

Epoxy prepreg optimised for press moulding applications, developed for automotive component production. This product has a 5 minute cure time at 150'C.

Description	Order Code
SPX22397/RC245T/1250/46%/2DPE	PA13-6648
SPX22397/RC380T/1250/42%/POPA	PA13-6630

PN901 High TG Prepregs

PN 901 is an ideal prepreg resin for high temperature composite applications, as it combines the ease of processing and handling convenience of epoxy resins, high temperature stability of polyimides, and flame / fire resistance of phenolics. A 120°C cure for 75 minutes combined with a post-cure, enables PN 901 to generate a Tg in excess of 300°C, making PN 901 ideal for applications in composite structures, which are exposed to very high temperatures for short durations. The flame and smoke characteristics of PN 901 composites show that this resin possesses superior flame retardant properties and holds a wide range of Aerospace grade FST (Fire/Smoke/Toxicity) standards.

Description	Order Code
PN901/RC660T/40%/1270MM	NN13-6301

EXPORT CONTROL - an export licence will be required to ship this material outside of the European Union.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

Prepreg Materials

SparPreg™

SparPreg™ is an advanced UD prepreg, developed to enable to economic manufacture of unidirectional spar caps for more demanding spar designs. SparPreg™ is specifically formulated to produce low void content unidirectional prepreg from vacuum bag only processing.

Description	Typical Roll Length (m²)	Order Code
Sparpreg/HSC/600/1240/34+3%/2DPE	148.8	PA53-5995
Sparpreg/HSC/600/300/34+3%/2DPE	105.6	PA53-5924
Sparpreg/HSC/600/300/34+3%/2DPE	22.5	PA53-6685

Intensifying Pastes

Gurits mono-component pastes are pre-catalysed adhesive/filler systems that can be used in conjunction with Gurit prepregs and SPRINT™. They are used as in-situ fillers to bridge corners or tight radii and can also be used as core splicing adhesives. The system range covers black and white variants in high and low densities. Being pre-catalysed system, they require freezer storage for long-term stock holding. Outlife at 20°C is about 20 days.

For use with SE 84 (or SPRINT™ at 80 degrees)

Description	Order Code
SP 4832 Black 15kg (22lt) pail for use with dispensing machines	FX4832-32
SP 9435 White - High density - mono-componenet intensifying paste 300ml Resin	FX9435-28
SP 4832 Black - low density - mono-componenet intensifying paste 300ml	FX4832-31

For use with SE 70

Description	Order Code
SPX11100 Dark Grey mono-component intensifying paste 300ml	FY1100-32

Please check availability with your Customer Support representative

Adhesive films

SA 70 is an adhesive film that is designed for secondary bonding, core-bonding and for co-curing with the range of Gurit prepregs. It can be cured at temperatures as low as 70° C, or can be more quickly cured at temperatures above 120°C. The product has an outlife of 28 days.

SA 80 is an adhesive film that is designed for secondary bonding, core-bonding and for co-curing with the range of Gurit prepregs. It can be cured at temperatures as low as 80°C, or can be more quickly cured at temperatures above 120°C. It has an outlife of 56 days at room temperature.

SA 70

Description	Carrier Type	Typical Roll Length (m²)	Order Code
SA70/00/150g/1270mm	None	103	PP00-5549
SA70/00/250g/1270mm	None	63.5	PP00-2967
SA70/S/150g/1270mm	Glass	127	PP11-3420
SA70/S/250g/1270mm	**Glass**	**102**	**PP11-2279** *
SA70/S/400g/1270mm	Glass	63.5	PP11-2278

SA 80

Description	Carrier Type	Typical Roll Length (m²)	Order Code
SA80/00/150g/1270mm	None	127	PP00-5476
SA80/00/200g/1270mm	None	127	PC00-1778
SA80/S/150g/1270mm	Glass	127	PC11-666
SA80/S/250g/1270mm	**Glass**	**102**	**PC11-579** *
SA80/S/400g/1270mm	Glass	63.5	PC11-580

Order Quantites

Gurit will endeavour to ship to a +/-10% tolereance of the target roll length.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

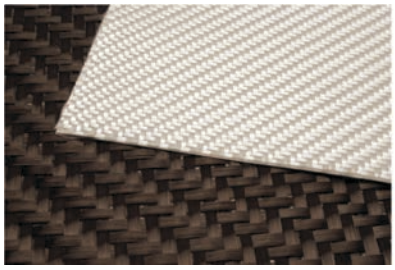
Gurit Prepreg Selector Guide

	PRODUCT NAME	MAIN FEATURES	LOWEST CURE		FASTEST CURE		TOUGH-ENED	RECOMMENDED PROCESSING METHOD	MAX T_g, BY DMA (°C)
			TEMP (°C)	TIME (HRS)	TEMP (°C)	TIME (MINS)			
PERFORMANCE	ST 70 / SE 70	¬ Curable at 70°C in thick sections ¬ Available in SPRINT™ and Prepreg formats ¬ Range of compatible 70°C curing products	70	16	120	25	No	Autoclave Pressed Vacuum Bagging	126
	SE 84LV	¬ Versatile high-strength prepreg system ¬ Curable at 80°C in thick sections ¬ Available in SPRINT™ and Prepreg formats	80	12	120	60	Yes	Autoclave Pressed Vacuum Bagging	115
	ST 160	¬ Ideal for structural out of autoclave applications ¬ Rapid cure using out of autoclave processing ¬ SPRINT™ technology ensures high quality laminates	140	4	180	15	Yes	Autoclave Pressed Vacuum Bagging	165
	SE 200	¬ Rapid cure using press moulding at 200°C ¬ High Tg in exces of 200°C ¬ Excellent mechanical performance	150	2	200	<30		Pressed	210
	SC 110	¬ White spot free high clarity resin for cosmetic parts ¬ Versatile, high stength prepreg resin system ¬ Flexible curing options at temperatures as low as 85°C	85	10	120	60	No	Autoclave Pressed	120
	PN 901 / SE 300	¬ Modified Cyanate Ester resin system ¬ High Tg system with good moisture resistance ¬ suitable as a BMI resin substitution	125	120	135	30	No	Autoclave Pressed Vacuum Bagging	300
	PH 840	¬ Halogen Free modified phenolic system ¬ Improved vacuum bag processing surface finish ¬ Adjustable tack	120	90	160	10	No	Autoclave Pressed Vacuum Bagging	190
	SE 84 Nano	¬ Nano-technology for outstanding mechanicals ¬ Benefits from attributes of SE 84LV ¬ Incorporates 3M™ Resin Matrix	80	12	120	60	No	Autoclave Pressed Vacuum Bagging	140
	SE 85	¬ Toughened - resistant to micro-cracking ¬ Available black pigmented	80	12	120	45	Yes	Autoclave Pressed Vacuum Bagging	115
	SE 85GT	¬ Highly toughened - resistant to micro-cracking ¬ Self-adhesive - high peel strength ¬ Available black pigmented	80	12	120	45	Highly	Autoclave Pressed Vacuum Bagging	100
STRUCTURAL	WE 91-1, WE 91-2	¬ High flow epoxy resin matrix ¬ Available with a high (-1) and medium (-2) tack variant ¬ Long ambient shelf-life - up to 2 months	85	12	120	60	No	Autoclave Pressed Vacuum Bagging	120
	WT 93	¬ High flow epoxy resin matrix ¬ Dry fabric resin infusion enables efficient air evacuation ¬ Suitable for automated lay-up	85	12	120	60	No	Autoclave Pressed Vacuum Bagging	120
	ST 94	¬ Drape and tackiness optimised for excellent handling ¬ Ideal for complex or vertical mouldings ¬ Excellent balance of mechanical performance and toughness	85	10	120	45	No	Autoclave Pressed Vacuum Bagging	115
	ST 95	¬ Good balance of of mechanical properties ¬ Dry fabric resin infusion enables efficient air evacuation ¬ Toughened - resistant to micro-cracking	85	10	120	45	Yes	Autoclave Pressed Vacuum Bagging	125
	SparPreg™	¬ UD prepreg ideal for thick structural sections ¬ Excellent handling & processing properties - no de-bulk ¬ Fully compatible with Gurit SPRINT™ and prepreg products	85	12	120	60	No	Autoclave Pressed Vacuum Bagging	120

Gurit Prepreg Selector Guide - cont'd

	PRODUCT NAME	SHELF-LIFE		3RD PARTY CERTIFICATIONS / QUALIFICATIONS	TYPICAL APPLICATIONS	TYPICAL REINFORCE-MENTS	ANCILLARY PRODUCTS
		MTHS @ -18°C	DAYS @ +21°C				
PERFORMANCE	ST 70 / SE 70	24	20 (ST) 28 (SE)	Germanischer Lloyd approved: ¬ UD carbon prepreg ¬ Biax / woven E-glass SPRINT™ ¬ Biax / woven carbon SPRINT™	Sandwich structures with honeycomb, foam and balsa cores	Carbon Aramid E-Glass	SF 70 SA 70 SP 11100
	SE 84LV	24	60	Lloyds Register: ¬ UD carbon prepreg ¬ Biax / woven E-glass prepreg ¬ Biax / woven carbon prepreg	High Performance light weight high stress structures - round the world yachts hulls and decks	Carbon Aramid E-Glass	SF 80, SA 80 SP 4832 SP 4202 SP 9435
	ST 160	12	8		Ideal for rapid manufacture of high quality structural components using out of autoclave processing	Carbon Aramid E-Glass	SA 80 SF 95VH
	SE 200	18	60		Ideal for aerospace and automotive body and closure panel applications through a one step manufacture process	Carbon Aramid E-Glass	
	SC 110	18	21		Ideal for high visual quality components without white-wash or white spots.	Carbon	
	PN 901 / SE 300	6	15	¬ ATS1000.001 ¬ FAR 25.853 (FST)	Stuctures for high tempertature applications such as engine cowlings etc	Astro Quartz Carbon E-Glass	
	PH 840	24	30	¬ BS 6853 a1(S4,SR2,ST2) ¬ UNE 23-727 M1 ¬ DIN 5510 (S4, SR2, ST2) ¬ NF F16-101 (M1,F1)	Ideal for monolithic or sandwich fire retardant structures and exterior or interior structural components	E-glass S-Glass R-Glass Carbon	
	SE 84 Nano	24	60		High compressive property application e.g. Very High Performance yacht masts	Carbon Aramid E-Glass	SF 80, SA80 SP 4832 SP 4202 SP 9435
	SE 85	24	60		Ideal for structural components where improved impact resistance to micro-cracking is required	Carbon Aramid E-Glass	SF 80, SA 80 SP 4832 SP 4202 SP 9435
	SE 85GT	24	60		Ideal for structural components where excellent impact resistance to micro-cracking is critical	Carbon Aramid E-Glass	SF 80, SA 80 SP 4832 SP 4202 SP 9435
STRUCTURAL	WE 91-1, WE 91-2	18	60	Germanischer Lloyd approved: ¬ Biax E-glass prepreg	High volume industrial grade prepreg	E-Glass Carbon	SF 80 SA 80 SP 9435
	WT 93	18	20	Germanischer Lloyd approved: ¬ UD E-glass prepreg	High volume industrial grade SPRINT™ material	Carbon Aramid E-Glass	SF 80 SA 80 SP 9435
	ST 94	24	60	Germanischer Lloyd approved: ¬ Biax / quad carbon SPRINT™ ¬ Woven Aramid SPRINT™	Ideal for large structures where heavyweight materials need to remain in the mould for long durations prior to curing.	Carbon Aramid E-Glass	SF 80 SA 80 SP 9435
	ST 95	24	14	Germanischer Lloyd approved: ¬ Biax / woven E-glass SPRINT™ ¬ Biax / woven carbon SPRINT™	High volume industrial grade toughened SPRINT™ material	Carbon Aramid E-Glass	SF 80 SA 80 SP 9435
	SparPreg™	18	60	Germanischer Lloyd approved: ¬ UD carbon (for marine, WE pending)	High quality monolithic unidirectional components that require fast single shot production in thick sections	Carbon E-Glass R-Glass	SF 80 SA 80 SP 9435

SPRINT™ Materials - for out of Autoclave Moulding



SPRINT™ - Film Infusion Technology – is a unique patented material and processing technology that allows high quality composite components, with high mechanical properties and very low void content, to be produced rapidly and economically.

SPRINT™ materials consist of a layer of fibre reinforcement either side of a pre-cast, precatalysed resin film with a very lightweight tack film on one face. The material therefore has the appearance of dry reinforcement, which has resin concealed at its center. SPRINT™ materials are produced by a process that differs from conventional prepreg so that the fibres in the reinforcements remain dry and unimpregnated by the resin.

SPRINT™ materials are laid up in a mould and vacuum bagged as for conventional prepreg. However, when the vacuum is applied, the air transport properties of the dry reinforcement enable air trapped in the fibre bundles and between layers to be easily removed. When the temperature is then raised for the cure, the resin film softens and flows into the air-free reinforcement. The void content of the resultant laminate is extremely low (typically 0-0.5%).

SPRINT™ is available in a number of resin and reinforcement combinations using woven and stitched carbon, glass, aramid and hybrids in a multitude of styles. These can be in the form of random mat, woven fabrics, stitched fabrics, or simple rovings.

Unlike conventional prepreg the fibres are not held rigidly by the resin, so the SPRINT™ prepreg is much more drapable. The technology has been successfully applied to a range of applications from large structures (with thick laminates) to small complex mouldings.

SPRINT™ is also Germanischer Lloyds approved for some products within the range. Please see the following pages for more information, or contact your customer support representative for more details.

SPRINT™ Materials

Product Descriptions

Surfacing Film	Resin System / Carrier (if any) / Resin Weight / Surfacing Medium (if any) / Width
Structural SPRINT™	Resin System / Fabric / Resin Content / Fabric / Width
Single SPRINT™	Fabric / Resin Film

Description / Explanations

RC2 = RC200T	195gsm 3k Carbon, Twill Weave
RC303T	300gsm 12k Carbon, Twill Weave
RC6 = RC660T	660gsm 12k Carbon, Twill Weave

Order Quantites

Gurit will endeavour to ship to a +/-10% tolereance of the target roll length.

Minimum Order Quantity

For all items that do not form part of the Gurit Essentials range, a 35% surcharge will be applied to pricing on all orders below 240m^2

SPRINT™ Materials

ST 95 - Structural SPRINT™

ST 95 is a toughened SPRINT™ system that offers an extremely good balance of mechanical properties. With a minimum cure temperature of 80°C (with a suitable post-cure), it is ideal for structural components where improved performance and resistance to micro-cracking is desired. ST 95 resin matrix has good flow resistant characteristics that make it stable at room temperature (21°C). The product has a light tack on one side which aids placement in a mould tool. For details of cure schedules, please refer to data sheet.

ST 95 is Germanischer Lloyds approved for some glass and carbon products. Please contact your customer support representative.

Carbon

Description	Typical Roll Length (m²)	Order Code	
ST95/RC303T/42%/RC303T/1270/T/popa	25.4	SL13-2826	†
ST95/RC303T/51%/RC303T/1270/T/popa	12.5	SL13-2878	* †

Glass

Description	Typical Roll Length (m²)	Order Code	
ST95/RE301H8/46%/RE301H8/1270/T/popa	19.05	SL11-2891	* †
ST95/WRE581T/41%/WRE581T/1250/T POPA	12.5	SL11-2560	†

ST 70 - Structural SPRINT™

This is a low temperature (70ºC) cure, SPRINT™ system. They have been developed for use in the construction of large components using low energy cure cycles, and have an outlife of 30 days at 23°C. Excellent properties can be achieved at this cure temperature, particularly compressive and interlaminar shear strengths. ST 70 is Germanischer Lloyds approved for some glass and carbon products. Please contact your customer support representative for more information.

Description	Typical Roll Length (m²)	Order Code	
ST70/RC416T/52%/XC411/1270/T	12.7	ST13-5958	*
ST70/RC416T/42%/XC411/1270/T	12.7	ST13-6217	
ST70/RC303T/42%/RC303T/1270/T /popa	19.05	SA13-4555	
ST70/WRE581T/41%/WRE581T/1250/T	12.5	SA11-4399	

Materials can be supplied in long rolls on a stillage on request

* Additional resin included for core-bonding.

SPRINT™ Materials

ST 70 - Single Sided SPRINT™

Carbon

Description	Typical Roll Length (m²)	Order Code	
ST70/RC200T/1270/42+/-3%/S/S	63.5	ST13-4666	†
ST70/RC416T/1270/42%/S/S	63.5	SA13-4493	†
ST70/XC305/1270/42%/S/S	31.75	ST23-5884	†
ST70/XC411/1270/42%/S/S	25.4	SA23-4494	†

Glass

Description	Typical Roll Length (m²)	Order Code	
ST70/XE603/1255/48%/S/S	31.25	ST21-5632	†
ST70/XE905/1270/43%/S/S	15.24	SA21-4396	†

SPRINT™ Surfacing Materials

Gurit have a range of surfacing materials specific to a number of applications. SF 70 and 80 are pale green lightweight, sandable films curable at 70°C and 80°C respectively. It provides a pin-hole free surface to all marine mouldings with minimal print-through, onto which a paint finish can be applied.

SF 95VH is a silicon carbide filled surfacing system developed initially for the automotive sector to protect vulnerable underbody components of both GT racing and sports cars which minimises fibre damage from foreign object impacts. For details of cure schedules, please refer to data sheet.

SF 95PF is a grey filled epoxy film designed to enhance the surface finish of composite components. Curable at 85°C with a vacuum only process it provides an easy sanding pinhole free surface finish with minimal print through from the underlying laminate. SF 95PF provides a stable surface onto which a paint finish can be applied once lightly keyed.

Description	Typical Roll Length (m²)	Order Code
SF70/S2/150g/1260	63	SC11-4405
SF80/S2/150g/1260	62.75	SC11-2829
SF95VH/S2/300g/1270	63.5	SA11-1654
SF95PF/S2/300g/1260/Black	50.4	SA11-2351

SPRINT™ Materials

Single SPRINT™

ST 94 is a toughened system offering a good balance of mechanical properties. It comprises of a single layer of reinforcement fabric plied against a resin filmed paper. The resin film has a medium tack that makes it ideal for vertical surface applications. Although moderately tacky, ST 94 can be repositioned once in place without disturbing the underlying single SPRINT™ layers.

ST 94 is Germanischer Lloyds approved for some glass and carbon products. Please contact your customer support representative for more information.

Carbon

Description	Typical Roll Length (m²)	Order Code
ST94/RC660T/1270/42+/-3%/S/S	22.86	SR13-3109 †
ST94/XC411/1270/42+/-3%/S/S	25.4	SR23-3134 †
ST94/XC611/1270/40±3%/S/S	25.3	SR23-3839 †

Glass

Description	Typical Roll Length (m²)	Order Code
ST94/WRE581T/1250/33%+/-3%/S/S	31.25	SR11-3219 †
ST94/QE1203/1270/35+/-3%/S/S	15.24	SR21-2850 †

These items may have a minimum order quantity of more than 1 roll. Similar format SPRINT™ materials are also available with ST 70 - 70°C curing system. Please contact your Customer Support representative for details.

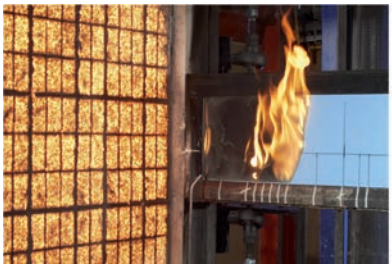
S-Core

S-Core is a multi-layered moulding material consisting of a layer of polyester non-woven honeycomb material against a precatalysed resin film. It must be accompanied by a SPRINT™ laminate on both faces.

S-Core has a cured thickness of 4mm, making it ideal for bulking out laminates.

Description	Typical Roll Length (m²)	Order Code
ST70/S-Core/4.0mm/1270	12.7	SA11-4522 †
ST94/S-Core/4.0mm/1270	10.16	SR11-3444 †

Fire Retardant Materials



Gurits range of Fire Retardant (FR) products are designed to deliver high performance laminates whilst meeting demanding fire requirements.

The ease of use and processing properties of these systems allow large parts to be manufactured in one operation using vacuum only consolidation.

The Fire Retardant range is available in a wide variety of formats from ambient curing liquid systems to elevated temperature curing SPRINT™ products.

Typical applications include cladding of buildings, interior and exterior train parts, commercial/military craft and fire protection on passenger ferries/superyachts.

- Ambient Curing FR Products
  - Ampreg 21FR
  - Adhesives & Surfacing Materials

- Elevated Temperature Curing
  - ST 70FR
  - SE 90FR
  - ST 90FR
  - SF 80FROBL
  - SF 90FRBL

Fire Retardant Materials - Ambient Curing

Fire Retardant Surfacing Materials & Adhesives

Please contact a member of Gurits customer support team for information on fire retardant surfacing materials.

Ampreg 21FR

Fire Retardant Epoxy Wet Laminating System (resin to hardener mix ratio 100:21 by weight)

Ampreg 21FR has been optimised for the manufacture of large composite structures using hand layup, and vacuum bagging techniques. Ampreg 21FR has been designed to give excellent mechanical and thermal properties from both ambient temperature cures, and moderate temperature postcures (50°C). This system is available with a range of hardener speeds, from Fast to Ultra Slow. Ampreg 21FR Meets BS476 part 7 class 2 & UL94 V0 fire rating.

Product Availability in Drums

Ampreg 21FR Resin Size	Order Code
15.85 kg Resin	F122-004
257 kg Resin	F122-005

3 x 18 kg hardener required to match 257 kg resin.

3 x 15.4kg hardener required to match 257kg resin

900 kg hardeners in IBC's are made to order

Hardener	Order Code	
3.33 kg Standard	F121-036	
3.33 kg Slow	F121-037	
3.33 kg Extra Slow	F121-038	
18 kg Standard	F121-018	
18 kg Slow	F121-019	
18 kg Extra Slow	F121-020	
15.4 kg Ultra Slow	F122-006	*
900 kg Ultra Slow	F122-007	*

* Please refer to datasheet for mix ratio

Fire Retardant Materials - Elevated Curing

ST 70FR

Fire Retardant Glass Structural SPRINT™

ST 70FR is a low temperature curing Fire Retardant Epoxy SPRINT™ product. The SPRINT™ format makes this product ideal for the manufacture of thick sections requiring a high level of fire protection. It can be cured at temperatures as low as 70°C. Meets BS476 Pt 6 and Pt 7 Class 0.

SE 90FR / ST 90FR

Fire Retardant Prepreg & SPRINT™ Systems

SE 90FR is a high performance fire-retardant, hot-melt, epoxy prepreg system. This product is ideal for customers requiring a fire retardant UD carbon prepreg product. It can be co-cured with ST 90FR to give high quality FR laminates with vacuum only processing. ST 90FR can be cured at 90°C, yet retains an outlife of up to 56 days at 23°C. These products are ideal for structural components where selfextinguishing fire performance and high load bearing capability are desired. Meets DIN4102 B-1 in conjunction with SF 80FROBL surface film.

<table>
<tr><th rowspan="3">Format</th><th rowspan="3">Fire Retardant Matrix Resin</th><th colspan="6">Availability (fibre/fabric areal weight/m2)</th></tr>
<tr><th colspan="3">Carbon</th><th colspan="3">Glass</th></tr>
<tr><th>UD</th><th>Woven</th><th>Biaxial</th><th>Woven</th><th>Stitched Quadraxials</th><th>Biaxial</th></tr>
<tr><td rowspan="2">SPRINT™</td><td>ST 70FR</td><td colspan="3">not typically supplied on carbon reinforcements</td><td rowspan="2">290g - 850g</td><td rowspan="2">600g - 800g</td><td rowspan="2">600g - 900g</td></tr>
<tr><td>ST 90FR</td><td>n/a</td><td>200g - 670g</td><td>300g - 600g</td></tr>
<tr><td>Prepreg</td><td>SE 90FR</td><td>150g - 600g</td><td>200g - 670g</td><td>300g - 600g</td><td colspan="3">not typically supplied on glass reinforcements</td></tr>
<tr><td>Surface Film</td><td>SF 80FROBL</td><td colspan="3">N/A</td><td colspan="3">50-140g</td></tr>
<tr><td>FR Core Materials</td><td>G-PET 75FR
G-PET 100FR</td><td colspan="6">Excellent FST performance (Evaluated against DIN 5510, ASTM E1354, ASTM E662 & BSS7239)</td></tr>
</table>

A range of fire retardant surface coatings, adhesives and infusion system solutions are available from Gurit. Please contact a member of your local customer support team for further information on these products.

Core Materials



Introduction
Cores in a sandwich construction are specified by designers and architects to increase stiffness and reduce the weight of a composite structure. Gurit has a range of core materials to fit any specification or manufacturing process.

Gurit® Corecell™ is a structural foam core material using a SAN polymer base featuring high toughness and impact resistant characteristics. Gurit® Corecell™ has become widely accepted for the construction of large, high performance structures. Although originally developed for the marine industry, it is now used in a range of other applications such as wind turbines and sub sea vessels. Gurit® Corecell™ grades have various type approvals including the American Bureau of Shipping (ABS), Det Norske Veritas (DNV), Germanischer Lloyd (GL), Registro Italiano Navale (RINA) and Bureau Veritas (BV). Please check for additional product approvals.

Gurit® PVC is a closed cell, cross-linked PVC foam. It provides high strength to weight ratio for all composite applications. Other key features include outstanding chemical resistance, low water absorption and excellent thermal insulation capabilities.

Gurit® G-PET™ is a highly adaptable, recyclable, thermoplastic foam with a good balance of mechanical properties, temperature resistance, density and cost for a wide range of applications and production processes. Gurit® G-PET™ is approved by Germanischer Lloyd (GL) and American Bureau of Shipping (ABS). Gurit® G-PET™ is approved by Det Norske Veritas (DNV).

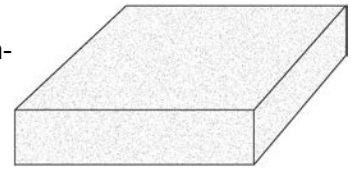
Gurit® Balsaflex™ is the classic end-grain balsa wood core, featuring highest strength and stiffness to weight ratio of all core materials. Gurit® Balsaflex™ is available in range of densities, thickness and format/finish. Gurit® Balsaflex™ is approved by Germanischer Lloyd (GL) and Lloyd's Register

Core Materials

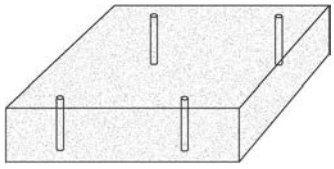
Forms of Supply

Gurit standard product forms are described below. Gurit can also tailor sheets to your own specification - please call to discuss your requirements.

PL – Plain Sheet – Optimum material properties. Limited bending in-mould.



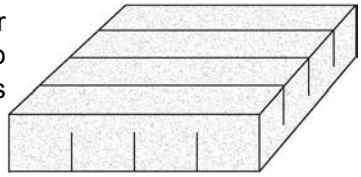
PH – Plain with Bleeder Holes – Assists air release in vacuum bag processes.



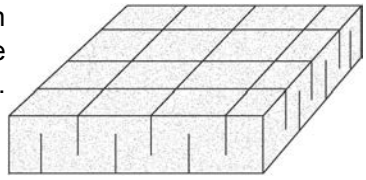
Cuts for conformability (Foam)

Gurit knife cut finish is standard on Gurit® Corecell™ and Gurit® G-PET™. Saw cut is standard for Gurit® PVC while knife cut finish on Gurit® PVC is limited. Knife cuts are not visible when the sheets lie flat and these narrow knife-cuts minimize unnecessary resin consumption compared to saw-cut core finishes. Please be advised that cuts are dependant upon the density and thickness of the material. Higher density and thickness materials may need to be saw cut. Maximum sheet size is half of a full-size sheet. Please contact your customer support representative for more information.

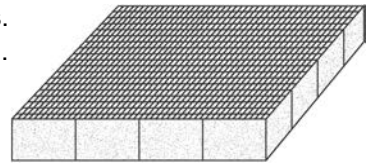
SC – Single Cut – Provides flexibility in a single direction on one or both sides of a sheet. If done on both sides, the cuts intersect so no bleeder holes are necessary for vacuum bagging. Max sheet size is half of a full-size sheet.



DC – Double Cut – Provides optimum flexibility in two directions on one or two sides of the sheets. If Double Cut on both sides, the intersecting cuts make DC a highly effective resin infusion medium. Max sheet size is half of a full-size sheet.



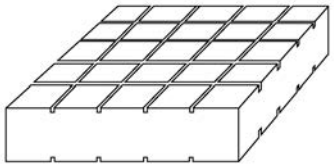
CS – Contour Scrim – Provides optimum flexibility in two directions. Sheets are cut in 30mm squares and bonded to a glass scrim. Available in half sheet size only.



Surface grooves for infusion – Available on all foam types

Core Materials

VIC – Vacuum Infusion Core – There are several VIC options and Gurit can customise grooving patterns and bleeder holes as required. For curved laminate sections, double-sided DC is very effective system for resin infusion with low weight gain. Heat forming VIC surface cut also useful for obtaining curved panels with minimal resin uptake.



Product Formats (Balsa)
Gurit® Balsaflex™ is available plain or with typical formats including perforations, microgrooves, with or without scrim, contour scrim and with optional coating.

Other Product Formats
Bead and Cove - Bead and cove strip planking aids the building of large, curved structures, in a mouldless build method.

Fillet strips – Triangular edge strips to create tapered panel edge drop-offs, or stringer base fillets.

Kits – Gurit has an extensive kitting capability to provide all the formats described here in customized, numbered, ready to use, CNC machined kits.

Core Materials Range

Gurit® Corecell™ M

Gurit® Corecell™ M is the next generation of Gurit® Corecell™. Combining high static properties, high toughness and compatibility with infusion and prepreg processes. Gurit® Corecell™ M benefits from American Bureau of Shipping (ABS), Det Norske Veritas (DNV), Germanischer Lloyd (GL), Registro Italiano Navale (RINA) and Bureau Veritas (BV) certification.

Gurit® Corecell™ A

Corecell™ A is the original Gurit® Corecell™ material. The styrene acrylonitrile (SAN) base chemistry has inherent toughness and elongation far beyond that of core materials. Gurit® Corecell™ A is suitable for processing up to 60°C and has ABS, GL and DNV certification.

Gurit® Corecell™ S

Gurit® Corecell™ S has been developed primarily to resist hydrostatic pressures in sub-sea applictions. It is manufactured in two densities, and buoyancy modules can therefore be designed to depths up to 1100 metres (averages). Gurit® Corecell™ S is only available in full thickness.

Gurit® Corecell™ T

Gurit® Corecell™ T is the lightest density Corecell™ foam available. T300 is an ideal choice for low density core applications. T400 provides improved compressive strength over M60 and is better suited for thin skinned laminates. Gurit® Corecell™ T has ABS, GL, and DNV certification.

Gurit® G-PET™

Gurit® G-PET™ is a highly adaptable, recyclable, thermoplastic foam with a good balance of mechanical properties, temperature resistance, density and cost for a wide range of applications and production processes. Gurit® G-PET™ has GL certification.

Gurit® PVC

Gurit® PVC is a closed cell, cross-linked PVC foam. It provides high strength to weight ratio for all composite applications. Gurit® PVC has DNV certification. The Gurit® PVC range also offers HT60 and HT80 with high temperature processing up to 140°C.

Gurit® Balsaflex™

Gurit® Balsaflex™ is the classic high quality end-grain balsa wood core. Rigid panels are available in higher thickness, flexible panels are available up to 55mm. Large flexible panels with 1220 x 1220mm are also available. Gurit® Balsaflex™ has GL certification.

Gurit® Corecell™ available from the Gurit site in Magog (Canada)

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
Corecell	T400	White + Green	71	4.4	1285x1285	50.5x50.5	1285x2605	50.5x102.5	3-85	1/2 - 35/16	Essentials
Corecell	T500	White + Blue	94	5.9	1195x1220	47x48	1195x2440	47x96	3-40	1/8 - 19/16	
Corecell	T550	White + Yellow	104	6.5	1170x1170	46x46	1170x2360	46x93	3-35	1/8 - 13/8	
Corecell	T600	White + Black	115	7.2	1130x1130	44.5x44.5	1130x2278	44.5x89.5	3-35	1/8 - 13/8	
Corecell	T800	White + light brown	143	8.9	1015x1015	40x40	1015x2050	40x80.5	3-35	1/8 - 13/8	
Corecell	M60	Yellow + Green	65	4.1	1285x1285	50.5x50.5	1285x2605	50.5x102.5	3-50	1/8 - 2	
Corecell	M80	Yellow + Blue	85	5.3	1220x1220	48x48	1220x2440	48x96	3-50	1/8 - 2	
Corecell	M100	Yellow + Black	107.5	6.7	1130x1130	44.5x44.5	1130x2275	44.5x89.5	3-48	1/8 - 17/8	
Corecell	M130	Yellow + Light Brown	140	8.7	1015x1015	40x40	1015x2045	40x80.5	3-44	1/8 - 13/4	
Corecell	M200	Yellow + Brown	200	12.5	915x915	36x36	915x1830	36x72	3-31	1/8 - 11/4	
Corecell	A400	Green	69	4.3	1220x1220	48x48	1220x2440	48x96	3-40	1/8 - 19/16	Specialist
Corecell	A450	Orange	81	5	1220x1220	48x48	1220x2440	48x96	3-34	1/8 - 15/16	
Corecell	A500	Blue	92	5.7	1220x1220	48x48	1220x2440	48x96	3-50	1/8 - 115/16	
Corecell	A550	Yellow	103	6.4	1180x1180	46.5x46.5	1180x2380	46.5x93.5	3-38	1/8 - 11/2	

Gurit® Corecell™ available from the Gurit site in Magog (Canada) continued

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
Corecell	A600	Black	116.5	7.3	1130x1130	44.5x44.5	1130x2250	44.5x88.5	3-35	1/8 - 1 3/8	Specialist
Corecell	A800	Pale Brown	150	9.3	1015x1015	40x40	1015x2045	40x80.5	3-32	1/8 - 1 3/8	
Corecell	A1200	Brown	210	13.1	915x915	36x36	915x1830	36x72	3-30	1/8 - 1 1/4	
Corecell	S1200	Red + Brown	210	13.1	890x890	35x35	890x1830	35x72	21-24	53/64 - 15/16	
Corecell	S1800	Red + Mauve	315	19.7	785x785	31x31	785x1600	31x63	16-21	5/8 - 53/64	

Please note: Maximum unbonded thicknesses can vary across Gurit sites. Please contact your local sales representative for more information

Gurit® Corecell™ available from the Gurit site in Tianjin (China)

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
Corecell	T400	White + Green	71	4.4	1340x1310	52.8x51.6	1340x2620	52.8x103	3-56	1/8 - 2 3/17	Essentials
Corecell	T500	White + Blue	94	5.9	1195x1220	47x48	1195x2440	48x96	3-40	1/8 - 1 1/2	
Corecell	M60	Yellow + Green	65	4.1	1285x1285	50.5x50.5	1285x2605	50.5x102.5	3-44	1/8 - 1 3/4	
Corecell	M80	Yellow + Blue	85	5.3	1220x1220	48x48	1220x2440	48x96	3-44	1/8 - 1 3/4	
Corecell	M100	Yellow + Black	107.5	6.7	1130x1130	44.5x44.5	1130x2275	44.5x89.5	3-37	1/8 - 1/2	

Gurit® Corecell™ available from the Gurit site in Tianjin (China) continued

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
Corecell	M130	Yellow + Light Brown	140	8.7	1015x1015	40x40	1015x2045	40x80.5	3-32	1/8 - 1 3/8	Essentials
Corecell	M200	Yellow + Brown	200	12.5	915x915	36x36	915x1830	36x72	3-30	1/8 - 1 1/4	
Corecell	A500	Blue	92	5.7	1220x1220	48x48	1220x2440	48x96	3-35	1/8 1 3/8	Specialist
Corecell	A550	Yellow	103	6.4	1180x1180	46.5x46.5	1180x2380	46.5x93.5	3-38	1/8 - 1 1/2	
Corecell	A800	Pale Brown	150	9.3	1015x1015	40x40	1015x2045	40x80.5	3-32	1/8 - 1 3/8	
Corecell	A1200	Brown	210	13.1	915x915	36x36	915x1830	36x72	3-30	1/8 - 1 1/4	

Please note: Maximum unbonded thicknesses can vary across Gurit sites. Please contact your local sales representative for more information

Gurit® G-PET™ available from the Gurit site in Tianjin (China)

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
G-PET	80	Brown + Yellow	80	5	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	Essentials
G-PET	90	Brown + Orange	94	5.9	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET	100	Brown + Green	104	6.5	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET	110	Brown + Blue	114	7.1	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET	135	Brown + Grey	135	8.4	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET	200	Brown + Black	200	12.5	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET FR	75	Blue + Yellow	75	4.7	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	Specialist
G-PET FR	100	Blue + Green	100	6.2	1005/1220x1220	39.5/48x48	1005/1220 x 2440	39.5/48x96	3-245	1/8 - 9 5/8	
G-PET LITE	Comment : LITE being available in all densities but only supplied in thickness range 10-150mm (3/8-6 inches)										

Please note: Maximum unbonded thicknesses can vary across Gurit sites. Please contact your local sales representative for more information

Gurit® PVC and Gurit® PVC HT

Core Type	Density	Short Edge Marking	Nominal Density		Half Sheet Size		Nominal Sheet Size		Unbonded Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
PVC	40	Azure	40	2.5	Please contact your local Gurit representative		1330 x 2850	52.4x112.2	3-84	1/8 3 5/16	Essentials
PVC	48	Lilac	48	3			1270 x 2730	50x107.5	3-80	1/8 3 5/32	
PVC	60	Yellow	60	3.75			1150 x 2450	45.3x96.4	3-78	1/8 3 5/64	
PVC	HT60	Pink	60	3.75			1120 x 2400	44.1x94.5	3-78	1/8 3 5/64	
PVC	80	Green	80	5			1020 x 2180	40.2x85.8	3-72	1/8 - 2 53/64	
PVC	HT80	Light Yellow	80	5			1005 x 2150	39.6x84.6	3-75	1/8 2 61/64	
PVC	100	Red	100	6.24			950 x 2050	37.4x80.7	3-68	1/8 2 43/64	
PVC	130	Blue	130	8.12			850 x 1900	33.5x74.8	3-58	1/8 2 9/32	
PVC	200	Brown	200	12.5			750 x 1600	29.5x63	3-48	1/8 - 1 57/64	
PVC	250	Green	250	15.6			700 x 1500	27.6x59	3-47	1/8 - 1 27/32	

Please note: Maximum unbonded thicknesses can vary across Gurit sites. Please contact your local sales representative for more information

Gurit® Balsaflex™ available from the Gurit site in Ecuador

Core Type	Density	Short Edge Marking	Nominal Density		Special Sheet Size (Flexible panels only)		Nominal Sheet Size		Thickness Range		
			kg/m3	lb/ft3	mm	inches	mm	inches	mm	inches	
Balsaflex	110	Written	110	6.9	1220x1220	48x48	610x1220	24x48	6.35-55	1/4 - 2	Essentials
Balsaflex	150	Written	155	9.7	1220x1220	48x48	610x1220	24x48	6.35-55	1/4 - 2	
Balsaflex	220	Written	220	13.7	1220x1220	48x48	610x1220	24x48	6.35-55	1/4 - 2	

Please note: Maximum unbonded thicknesses can vary across Gurit sites. Please contact your local sales representative for more information

Core Materials

Core Kitting

Core kitting by Gurit offers the following benefits to customers:

- Reduced labour time
- Reduced waste levels
- High level of accuracy
- Improved overall quality

Wherever they are in the world, Gurit provides a local kitting service to its industrial and marine customers. Using either 5-Axis, or 3-Axis CNC machines, along with a range of semi-automatic machines and manual tools, the company's full range of core materials - Gurit® Corecell™, Gurit® G-PET™, Gurit® PVC or Gurit® Balsaflex™ - can be converted into customised, labelled and ready-to-use kits, based on the customer's drawings or 3D model.

Gurit has developed specific knowledge and experience of correct flute and clearance angles to provide optimum cutting conditions. This allows for quick cutting to minimise cost, accurate cutting for component dimensions, and fine cutting to allow the best nesting routines, so maximising yield rates and minimising waste.

Gurit stocks its range of core materials in each region, reducing the leadtime to supply cost-effective and flexible kitting solutions to meet every customer's requirements.

Vacuum Consumables



The range of vacuum consumables has been designed for use in a wide range of vacuum bag processes. Such processes include autoclave/ prepreg curing, wet lay-up, low temperature oven/ prepreg processes and infusion processes. Gurit has selected a specific range of products which are particularly suitable for working with Gurit's epoxy prepreg and laminating systems where they are regularly used for the curing of large composite structures at temperatures up to 150°C.

Vacuum Consumables

Sealant Tapes

Sealant tape is used to seal the tool to the vacuum bag in order to provide an airtight seal. The tapes are tacky to ensure a positive seal is achieved against a variety of tool surfaces.

Description	Notes	Rolls/Box	Order Code
AT90B	black, medium tack	30 x 15lm rolls/box	V700-001
AT140	white, medium tack	30 x 15lm rolls/box	V700-002

Peel Plies

Peel plies are fine weave fabrics which are applied to the laminate stack to provide a clean, contaminant-free textured surface, suitable for secondary bonding, filling or painting. Our range is green in colour.

Description	Width (mm)	Roll length (lm)	Order Code
Ecostitch Fluo/1000MM/100M ROLL	1000	100	V620-022
Ecostitch Fluo/750MM/100M ROLL	750	100	V620-037
Ecostitch Fluo/500MM/100M ROLL	500	100	V620-023
Ecostitch Fluo/250MM/100M ROLL	250	100	V620-021
Ecostitch Fluo/200MM/100M ROLL	200	100	V620-024
Ecostitch Fluo/150MM/100M ROLL	150	100	V620-025
Ecostitch Fluo/100MM/100M ROLL	100	100	V620-026
Ecostitch Fluo/50MM/100M ROLL	50	100	V620-035

Release Films

Release films are used to separate and release the laminate from the vacuum stack following the cure of the component. These films are perforated to allow a certain bleed of resin from the laminate into a breather material such as Econoweave 44W.

Description	Width (mm)	Roll length (lm)	Order Code
WL3600MP22/1200 Rel. Film 500m Roll	1200	500	V600-002
WL3600P3/1200 Rel. Film 500m Roll	1200	500	V600-003
WL3600P98/1200 Rel. Film 500m Roll	1270	500	V600-024
WL3600RP2/1520 Rel. Film 500m Roll	1520	500	V600-015
WL3600RP3/1520 Perforated Rel. Film	1520	1000	V600-021

Vacuum Consumables

Breather Fabrics / Meshes

Breather fabrics are used to absorb excess resin (bleed) from a laminate which is being cured under vacuum. The fabric also allows the air, or any volatiles, to be evacuated prior to, and during the cure cycle.

Description	Width (mm)	Roll length (lm)	Order Code
Airweave N10	1520	50	V660-013
Airweave N4	1520	100	V660-012
Breatherflow 20	950	152	V660-003
Knitflow 40	2500	80	V660-004

Vacuum Bagging Films

Vacuum bagging films are used to effectively seal the whole of the area of the composite laminate to be cured.

Description	Width (mm)	Roll length (lm)	Order Code
WL7400	4064	229	V680-002
WL7400	2794	305	V680-001

Self Adhesive Mould Release Materials

Self-adhesive mould release materials are used to cover moulds as an effective alternative to the use of release wax or liquids.

Description	Notes	Width (mm)	Unit of Sale	Order Code
Tooltec A007	adh. backed PTFE on glass carrier	1000	20sqm	V750-001

Spray Contact Adhesive

Description	Order Code
Spray Contact Adhesive (691ml can)	V840-004

Vacuum Consumables

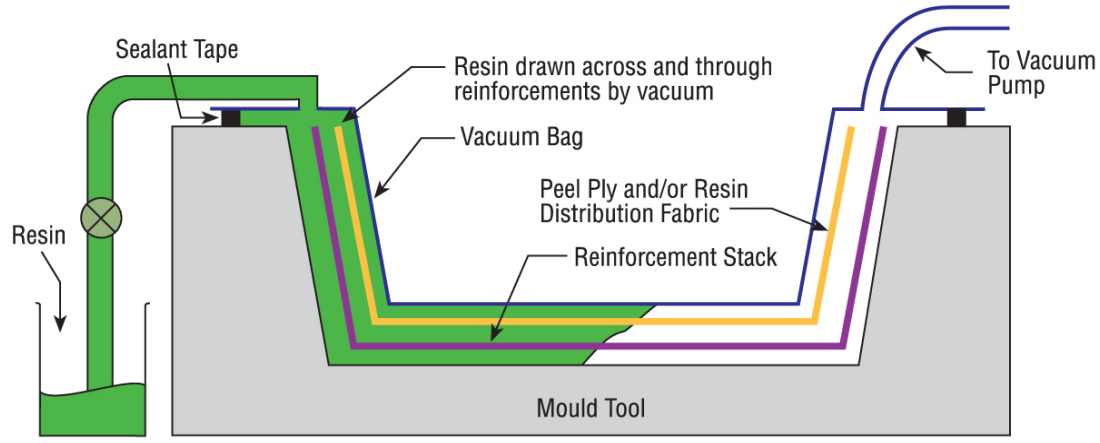
Flash / Release / Shrink Tapes

Flash tapes are used to locate vacuum consumable materials or to mask off areas to be painted, sanded or to prevent damage. Some of these tapes have release qualities so they can be used as tool repair tapes if necessary. Shrinktapes are used to consolidate specific components.

Description	Notes	Width (mm)	Unit of Sale	Order Code
A575RC	release coated shrink tape	32	91 lm roll	V740-001
A575RC	release coated shrink tape	64	91 lm roll	V740-002

Infusion

Gurit have selected a range of infusion materials which can be used from the simplest test panel to the largest constructions. Resin infusion is very similar to vacuum bagging in that differences in air pressure consolidate the laminate stack and control the resin content of the composite. The main difference is that the reinforcement fibre is introduced into the mould dry not wetted out with resin. A peel ply and infusion mesh are then introduced, the mould is then sealed using a vacuum bag and tacky tape. The mould is then evacuated of air very like vacuum bagging. Once the vacuum bag has been sealed and the vacuum level maintained the resin system is introduced through inlet pipes. The resin then flows / is sucked into the mould over the infusion mesh and down into the laminate. This generates very repeatable, in weight and strength, mouldings by a clean and controllable production method. For further details visit www.gurit.com or contact your local Gurit office for full details on the Gurit infusion component range.



Ancillary Products

In order to assist in the use of the wide range of materials manufactured and supplied by Gurit, a range of Ancillary Products are also available. These have been refined over many years to enable users to handle products safely and to obtain the very best results from Gurit materials. The Ancillary Products are grouped together into three main categories:

- Filler Powders – This section includes a range of filler powders which are designed to modify the properties of some of the Gurit liquid solvent-free resin systems, and so create resin mixes for use as fillers and adhesives. The fillers form three distinct categories: hollow spheres, short fibres, and flow modifiers.
    - Hollow spheres - Increase the volume and reduce the density of any resin system and are used to make adhesive mixes and filling & fairing mixes.
    - Short Fibres - For adding strength to a resin and hardener mix used as a structural adhesive, short reinforcing fibres are often added which act in a similar strengthening way to the long reinforcing fibres used in composite construction.
    - Flow Modifiers - The most common material for modifying the flow properties of a resin mix is colloidal silica. This is a very fine powder which is added in conjunction with other fillers to ‘thicken’ mixes and reduce their flow on vertical surfaces (increase thixotropy).
- Solvents – This section includes a range of solvents for cleaning tools and surfaces. Due to the very different chemistry of some of the Gurit products from each other, it is important that the correct solvents are selected for the intended application.
- Application, Processing and Sundry items – This section includes pumps and dispense equipment, application and processing items and pigments

Ancillary Products

Filler Powders

Microballoons

Brown microsphere filler powder used to make glues or paste fillers.

Size	Order Code
0.3 kg (approx. 3 litres)	A225-003
5.0 kg (approx. 50 litres)	A225-005
12.0 kg (approx. 120 litres)	A225-007

Glass Bubbles

White microsphere filler powder used to make glues or paste fillers.

Size	Order Code
0.12 kg (approx. 1-1.5 litre) (minimum order 5 units)	A230-005
0.3 kg (approx. 2-3 litres)	A230-001
5.0 kg (approx. 30-50 litres)	A230-003

Microfibres

Cellulose fibres used to make adhesive mixes.

Size	Order Code
0.5 kg (approx. 5 litres)	A215-003
5.0 kg (approx. 50 litres)	A215-005
10.0 kg (approx. 100 litres)	A215-008

Colloidal Silica

Fine, anti sag, filler powder. Use in combination with other filler powders.

Size	Order Code
0.25 kg (approx. 5 litres)	A220-003
2.5 kg (approx. 50 litres)	A220-005
10.0 kg (approx. 200 litres)	A220-006

Ancillary Products

Ancillary Kit

For use with Handipack and small packs of products for filling, gluing and laminating.

Quantity	Description	Order Code
10 x Box of 5	Each pack contains: 1 x pot Microballoons, 1 x pot Colloidal Silica, 1 x pot Microfibres, 4 x pairs Disposable Gloves, 2 x 1/2” Brushes, 5 x Mixing Sticks, 2 x Mixing Pots, 1 x 1 metre Woven Glass Tape, Filler Guide	A300-003

Cleaning Solvents

Fast Epoxy Solvent (Solvent A) Surface Degreaser

Size	Order Code
SP FAST EPOXY SOLVENT 5L	A105-003

Standard Solvent (Solvent B) Tool Cleaner

Size	Order Code
SP STD EPOXY SOLVENT 5L	A108-003

Cleaning Fluid (Solvent C) By-Product Remover

Size	Order Code
SP CLEANING FLUID 1L	A110-003

Please note, Gurits solvent-free epoxies such as SP 106, Ampreg 22 should never have solvent added to them to ‘thin them down’. If a lower viscosity, thinner epoxy product is required then this should be achieved by gentle warming of the product, or warming the surface to which the product is applied. Note that any extra heat applied will also accelerate the product’s rate of cure. Alternatively, there may be a different Gurit epoxy product with a more suitable viscosity for the intended application. For the correct solvent for a given application, please see the resin systems data sheet for details.

Ancillary Products

Pumps

Pump Code	Pump Description	Product to be used with	Product Code
K216-318	Minipump pair for any 1kg pack	SP115 RES/HARD BOX 5x1KG PACK	F110-017
		SP320 RES/HARD FAST 5x1KG PACK	F505-024
		SP320 RES/HARD SLOW 5x1KG PACK	F505-025
		SP106 RES/HARD FAST 5x1KG PACK	F510-037
		SP106 RES/HARD SLOW 5x1KG PACK	F510-038
		SP106 R/H FAST 1KG 10xBOX 5	F510-039
		SP106 R/H SLOW 1KG 10xBOX 5	F510-040
K216-313	Pump set SP320/Plas 14ml dispense (1KG)	SP320 RES/HARD FAST 5x1KG PACK	F505-024
		SP320 RES/HARD SLOW 5x1KG PACK	F505-025
K216-314	Pump set SP320/Plas 14ml dispense (4kg)	SP320 RESIN/HARD FAST 4KG PACK	F505-028
		SP320 RESIN/HARD SLOW 4KG PACK	F505-029
K216-312	Pump set SP320/Large 35ml dispense	SP320 RESIN 20KG	F505-035
		SP320 HARD FAST 6.66KG	F505-038
		SP320 HARD SLOW 6.66KG	F505-039
K216-315	Pump set SP106/Plas 12ml dispense (1kg)	SP106 RES/HARD FAST 5x1KG PACK	F510-037
		SP106 RES/HARD SLOW 5x1KG PACK	F510-038
		SP106 R/H FAST 1KG 10xBOX 5	F510-039
		SP106 R/H SLOW 1KG 10xBOX 5	F510-040
K216-316	Pump set SP106/Plas 12ml dispense (3kg)	SP106 RES/HARD FAST 3.02KG PACK	F510-041
		SP106 RES/HARD SLOW 3.02KG PACK	F510-042
K216-317	Pump set SP106/Plas 30ml dispense	SP106 RESIN 10.0KG	F510-004
		SP106 HARD FAST 1.8 KG (0.9x2)	F510-019
		SP106 HARD SLOW 1.8KG (0.9x2)	F510-031
K216-310	Pump set SP106/Metal 30ml dispense	SP106 RESIN 20KG	F510-051
		SP106 HARD SLOW 3.6KG	F510-053
		SP106 HARD FAST 3.6KG	F510-018
		SP106 HARD EXTRA-SLOW 3.6KG	F510-052

Ancillary Products

Dispense Equipment

50 cc & 10 cc Syringe

Quantity	Description	Order Code	
Each	10cc Syringe (1cc graduations)	A660-001	**
Each	50cc Syringe (10cc graduations)	A660-002	**

Drum Taps

Quantity	Description	Order Code
Each	25 litre Drum Tap (small plastic)	K342-005
Each	200 litre Drum Tap (large plastic)	K342-010

Application and Processing Items

Re-useable Mixing Pot

Quantity	Description	Order Code	
Each	Reusable Mixing Pots 0.5L (0.8L max)	A640-013	*
Each	Clear lid for Mixing Pots	A640-014	

Shaped Mixing Sticks

Quantity	Description	Order Code
1 box	Mixing Sticks (box 100 sticks)	A640-004

Spiked Roller

Quantity	Description	Order Code
1	Spiked roller for de-aeration of prepreg laminates - 5” with frame & handle	A610-001

* Minimum order of 100 Reusable Mixing Pots.

** Syringes should be washed with warm water and a mild detergent, then flushed with clean water and allowed to air dry before use.

Ancillary Products

Pigments

Epoxy Pigment

Quantity	Description	Order Code
0.5kg	Pigment - white	A445-002
0.5kg	Pigment - black	A445-004

Contact

In an effort to answer incoming telephone calls more promptly and to improve the service to our customers, we operate an automated attendant telephone system. The main benefit of the system is that multiple calls are answered simultaneously thus reducing customer waiting time, and individuals can be contacted directly, even outside of the switchboard open hours (Monday - Friday: 0830 - 1700 (GMT)).

Begin by dialling the Gurit (UK) Ltd main number (see below). Providing you have a touch-tone phone (your key pad should have a * or #), you are able to dial the extension number of the person you require as soon as the call is answered by the Automated Attendant. If the person at the extension you have dialled is not available you will be given the option of leaving a message in their voice mail. If you choose to leave a message then you can either hang up when done, or press zero to get to another extension. If you do not wish to leave a message at all but would instead like to speak to someone else, then press zero as soon as the message begins. This will put you through to the operator or, out of hours, the main Gurit (UK) Ltd answering service.

If you do not have a touch-tone phone, or you do not know to whom you wish to speak, then simply remain on the line during the welcoming message and during office hours (08.30 - 17.00) your call will be answered by the operator. Outside office hours you will be invited to record a message.

Email and Website

All personnel list can be contact directly by email. The format for each e-mail address is: **firstname.surname@gurit.com**. If you are not sure who to contact email contact@gurit.com. Information on products can be found at our website www.gurit.com. The site contains the most up to date information on all products, available to download in PDF format.

Contacting Gurit

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Contacting Gurit

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Notes

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