

SPABOND 570

WOOD BONDING ADHESIVE

- Simple 1:1 mix ratio by weight and volume
- Excellent Health and Safety
- High tolerance to off ratio mixing
- Excellent application characteristics
- Highly sag resistant – up to 15 mm on a vertical surface
- Tolerant of very high humidity

INTRODUCTION

Spabond 570 teak deck adhesive has been formulated to give the optimum mechanical and working properties for bonding teak decking to a composite hull. Designed specifically for this purpose, it is the ideal adhesive for bonding down teak decks.

In use, Spabond 570 has a tolerant 1:1 mix ratio and a thixotropic, gel type consistency. This makes Spabond 570 very easy to measure, mix and apply.

Spabond 570 is non-corrosive, solvent free and cures at room temperature. When cured, Spabond 570 is tough, highly adhesive and very strong and generates green strength rapidly (does not require post curing).

SYSTEM PROPERTIES*		MIXED VISCOSITY @ 25°C*	SAG RESISTANCE @ 20°C*	GEL TIME IN AIR @ 20°C *	TEAK LAPSHEAR STRENGTH (16H @ 50°C)	CURED TG (16H @ 50°C)	PAGE
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	Standard Hardener	800 – 850 P	15 mm	47 mins	26 MPa	55°C	3
	Low Viscosity Hardener (mixing machine pumpable)	600 – 800 P	10 mm	45 mins	21 MPa	61°C	4

**working time properties are highly subjective to ambient conditions and should be used as an approximate guideline for all SP 570 systems*

PRODUCT INFORMATION

AVAILABILITY

The product is available in a number of formats please contact your local customer support or download the latest product catalogue available on www.gurit.com.

TRANSPORT & STORAGE

The resin and hardeners should be kept in securely closed containers during transport and storage. Any accidental spillage should be soaked up with sand, sawdust, cotton waste or any other absorbent material. The area should then be washed clean (see appropriate Safety Data Sheet).

COMPONENT	UNITS	10 – 25°C
Spabond 570 Resin	months	24
Spabond 570 Hardener	months	24

Adequate long term storage conditions will result in a shelf life of 2 years for both the resin and hardeners. Storage should be in a warm dry place out of direct sunlight and protected from frost. The storage temperature should be kept constant between 10°C and 25°C, cyclic fluctuations in temperature can cause crystallization. Containers should be firmly closed. Hardeners, in particular, will suffer serious degradation if left exposed to air.

For more information on crystallization please refer to the Adhesives section on the Gurit website. (www.gurit.com)

INSTRUCTIONS FOR USE

The product is optimised for use at 10 - 30°C. At lower temperatures the components thicken and may eventually become unworkable. To ensure accurate mixing and good workability pre-warm the resin & hardener as well as the surfaces to be bonded before use.

SURFACE PREPARATION

Before using the product ensure that surfaces to be bonded are clean, dry and dust-free. Prepare all surfaces by abrading with medium grit paper or other suitable abrasive, remove dust then wipe with acetone.

Metals - usually require a chemical pre-treatment to create the best bond. Please contact Gurit for a Guide to Surface Preparation and Pre-treatments.

Polyester or vinylester - ensure laminates are fully cured before bonding, then prepare as above.

Epoxy laminates - it is recommended to use a suitable Peel Ply as the last stage in their manufacture, otherwise prepare as above. Trials may be required to test Peel Ply suitability.

Ferrocement - etch with 5% solution of hydrochloric acid, wash with fresh water, then dry.

Timber - sand with abrasive paper across grain. Degrease oily timber with a fast evaporating solvent (e.g. acetone). For resinous or gummy timber, etch with 2% caustic soda solution, wash off with fresh water and dry.

MIXING & HANDLING

The two components must be mixed thoroughly. If mixing by hand particular attention should be paid to the sides and bottom of the mixing vessel. Solvent free epoxy systems have a limited pot-life so do not mix more than can be used within 15 minutes at 18-20°C. Larger volumes and higher ambient temperature will reduce this available mixing time while lower ambient temperatures and smaller volumes will increase it. Transfer the mixed system into a shallow tray of large area will help dissipate the heat of the chemical resin/hardener reaction and increase working time.

CURING

The system is designed to cure at ambient temperatures. Full cure can be achieved by a cure cycle of 28 days at 15-25°C. Exact times for any particular set of conditions have not been determined and users should satisfy themselves that adequate properties for the system are obtained for the particular combination of glue line thickness, substrate materials, cure temperature and elapsed time.

HEALTH AND SAFETY

The following points must be considered:

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

Washing should be part of routine practice:

- before eating or drinking
 - before smoking
 - before using the lavatory
 - after finishing work
6. The inhalation of sanding dust should be avoided and if it settles on the skin then it should be washed off. After more extensive sanding operations a shower/bath and hair wash is advised.

APPLICABLE RISK & SAFETY PHRASES

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

SPABOND 570 & STANDARD HARDENER

This 1 page product summary is intended for use in conjunction with further advice provided under the Instructions for Use section. All data has been generated from typical production material and does not constitute a product specification.

MIXING AND HANDLING

PROPERTY	UNITS	SP 570 RESIN	SP 570 HARDENER	MIXED SYSTEM	TEST METHOD
Appearance - colour	Gardner	Opaque White	Opaque Brown	Light Brown	-
Appearance - form	Description	Thixotropic paste			
Mix ratio by weight	Parts by weight	100	100	-	-
Mix ratio by volume	Parts by volume	100	100	-	-
Density at 21 °C	g/cm ³	1.17	1.17	1.17	Archimedes

COMPONENT & MIXED SYSTEM VISCOSITY

PROPERTY	UNITS	15 °C	20 °C	25 °C	30 °C	TEST METHOD
Spabond 570 Resin Viscosity	P	-	-	220 - 260	-	-
Spabond 570 Hardener Viscosity	P	-	-	800 - 850	-	-
Initial Mixed System Viscosity	P	-	-	230 - 270	-	-
Working time in thin film (tack free)	hrs:min	-	05:00	-	-	Internal Gurit Method
Working time at 15mm thickness	hrs:min	-	01:30	-	-	Internal Gurit Method
Gel time (100 g, in air)	hrs:min	-	00:47	-	-	Tecam Gel Time
Gel time (150 g, in water)	hrs:min	-	-	00:53	-	Tecam Gel Time
Sag resistance	mm	-	15	-	-	Internal Gurit Method

ADHESIVE PERFORMANCE

MECHANICAL PROPERTIES	SYMBOL	UNITS	7 DAYS AT 20°C	16 HOURS AT 50°C*	5 HOURS AT 70°C*	TEST STANDARD
Cleavage on steel	F _{cleavage}	kN	-	6.2	-	BS 5350 Part C1
Lap shear on steel	τ _{steel}	MPa	-	23.2	-	BS 5350 Part C5
Lap shear on teak	τ _{teak}	MPa	-	7.7 (note: failure in teak)	-	BS 5350 Part C5

*laminar failure

CURED MECHANICAL AND THERMAL PROPERTIES

MECHANICAL PROPERTIES	SYMBOL	UNITS	7 DAYS AT 20°C	16 HOURS AT 50°C*	5 HOURS AT 70°C*	TEST STANDARD
Glass Transition Temperature	T _g	°C	45	55	-	ISO 6721 (DMA)
Tensile Strength	σ _T	MPa	-	30.6**	-	ISO 527-2
Tensile Modulus	E _T	GPa	-	2.4**	-	ISO 527-2
3-point flexural strength	σ _F	MPa	-	66	-	ISO 178
3-point flexural modulus	E _F	GPa	-	2.2	-	ISO 178

*initial cure of 24 hours at 21°C

**post cure of 16hrs at 40°C

SPABOND 570 & LOW VISCOSITY (LV) STANDARD HARDENER

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MIXING AND HANDLING

PROPERTY	UNITS	SP 570 RESIN	SP 570LV HARDENER	MIXED SYSTEM	TEST METHOD
Appearance - colour	Gardner	Opaque White	Opaque Brown	Light Brown	-
Appearance - form	Description	Thixotropic paste			
Mix ratio by weight	Parts by weight	100	100	-	-
Mix ratio by volume	Parts by volume	100	100	-	-
Density at 21 °C	g/cm ³	1.17	1.17	1.17	Archimedes

COMPONENT & MIXED SYSTEM VISCOSITY

PROPERTY	UNITS	15 °C	20 °C	25 °C	30 °C	TEST METHOD
Spabond 570 Resin Viscosity	P	-	-	220 - 260	-	-
Spabond 570LV Hardener Viscosity	P	-	-	600 - 800	-	-
Initial Mixed System Viscosity	P	-	-	180 - 230	-	-
Working time in thin film (tack free)	hrs:min	-	05:00	-	-	-
Working time at 15mm thickness	hrs:min	-	01:30	-	-	-
Gel time (100 g, in air)	hrs:min	-	00:45	-	-	-
Gel time (150 g, in water)	hrs:min	-	-	00:52	-	-
Sag resistance	mm	-	10	-	-	-

ADHESIVE PERFORMANCE

MECHANICAL PROPERTIES	SYMBOL	UNITS	7 DAYS AT 20°C	16 HOURS AT 50°C*	5 HOURS AT 70°C*	TEST STANDARD
Cleavage on steel	F _{cleavage,steel}	kN	-	5.7	-	BS 5350 Part C1
Lap shear on steel	τ_{steel}	MPa	-	21	-	BS 5350 Part C5
Lap shear on teak	τ_{teak}	MPa	-	8.6 (note: failure in teak)	-	BS 5350 Part C5

*initial cure of 24 hours at 21°C

CURED MECHANICAL AND THERMAL PROPERTIES

MECHANICAL PROPERTIES	SYMBOL	UNITS	7 DAYS AT 20°C	16 HOURS AT 50°C*	5 HOURS AT 70°C*	TEST STANDARD
Glass Transition Temperature	T _g	°C	44	61	-	ISO 6721 (DMA)
Tensile Strength	σ_T	MPa	-	33	-	ISO 527-2
Tensile Modulus	E _T	GPa	-	2.1	-	ISO 527-2
Tensile Strain	ϵ_T	%	-	6.2	-	ISO 527-2
3-point flexural strength	σ_F	MPa	-	60	-	ISO 178
3-point flexural modulus	E _F	GPa	-	1.8	-	ISO 178

*initial cure of 24 hours at 21°C

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (the Company) only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at Gurit's Website: www.gurit.com/terms-and-conditions.aspx

The Company strongly recommends that Customers make test panels in the final process conditions and conduct appropriate testing of any goods or materials supplied by the Company prior to final use to ensure that they are suitable for the Customer's planned application. Such testing should include testing under conditions as close as possible to those to which the final component may be subjected. The Company specifically excludes any warranty of fitness for purpose of the goods other than as set out in writing by the Company. Due to the varied nature of end-use applications, the Company does, in particular, not warrant that the test panels in the final process conditions and/or the final component pass any fire standards.

The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

Telephone + 44 1983 828000 (08:30 – 17:00 GMT)
Email technical.support@gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

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