

SP 9435

MONO-COMPONENT EPOXY SYSTEM

- Co-curable with prepreg systems
- Compatibility of handling and processing
- Ideal for core splicing and gap filling

INTRODUCTION

SP 9435 is a single component epoxy system designed to co-cure at moderate elevated temperature with Gurit epoxy prepregs and SPRINTs®. The product is designed to be applied between gelcoat and prepreg, and will bridge any large (up to 20mm) gaps between the two. It is a highly thixotropic, gap filling paste.

PRODUCT INFORMATION

MIXING & HANDLING

SP 9435 resin is a mono-component system and therefore does not need to be mixed with another component. If stored in freezer conditions, the product should be warmed to ambient temperature before dispensing. It should be returned to the freezer immediately after use.

PHYSICAL PROPERTIES

Property	Unit	Value
Resin appearance	-	White Paste
Resin Viscosity (@ 25°C)	Poise	12 ± 200
Gel time (120°C hot block)	mins	31 ± 4
Resin Density	g/cm ³	1.3

STORAGE TEMP		UNIT	VALUE
-18°C	0°F	Months	>12
+4°C	39°F	Weeks	46
+9°C	48°F	Weeks	36
+21°C	70°F	Weeks	12

INSTRUCTIONS FOR USE

APPLICATION

The adhering surfaces should be dry, free of grease, oil, or mould release or similar material which would prevent adhesion of the system. The system can be applied by pallet knife or by a suitable dispensing/injection system. The polymerisation reaction of the system does not generate significant amounts of heat and so large volumes can be safely applied.

SP 9435 is sag resistant up to 5mm in thickness on a vertical surface, and retains thixotropy even at elevated temperatures.

BONDING TECHNIQUES & PEEL PLY

It is recommended to use nylon peel ply for any secondary bonding applications. Peel Ply is typically used on laminate surfaces which need to be left to cure or partially cure before further laminating or bonding operations. The peel ply serves two functions - preventing the surface from becoming contaminated and / or damaged, and providing a textured surface that can reduce the level of preparation required for the secondary laminating or bonding operations. After curing and just prior to bonding, the Peel Ply is stripped off leaving a clean, dust and grease free surface, with an already textured surface which makes the keying process less time consuming. Gurit recommends the use of its Stitch Ply A peel ply, or suitable Tygavac product. Any proposed peel ply should be tested prior to use to ensure that it not only releases adequately from the laminated surface but also does not leave any residues behind which may impair adhesion. If in doubt please contact Gurit Technical Support.

CURE SCHEDULES

The system is designed to co-cure with Gurit epoxy prepregs and SPRINTs®. A typical cure cycle for rapid curing is:

Ramp 2°C/min → 90°C, dwell 30 minutes

Then:

Ramp 2°C/min → 120°C, dwell 1 hour

An alternative cure cycle when co-cured with SE84LV, WE91-2, ST95 or ST94 is:

Ramp 0.3-2°C/min → 85°C, dwell min. 10 hours

Other cure times and temperatures are possible but no data has been determined for these alternative cure cycles. 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 mixed volume, cure temperature and elapsed time.

THERMAL PROPERTIES

Property	Unit	90°C for 30 mins, 120°C for 1 hour	85°C for 10 hours	Test Standard
T _{g2}	°C	94	95	ISO 11357-2 (DSC)
Ultimate T _{g2}	°C	97	108	ISO 11357-2 (DSC)

The cured mechanical properties of this product have not been determined.

Note: Product must see a minimum of 82°C to cure adequately.

TRANSPORT AND STORAGE

SP 9435 contains resin, hardener and catalyst components. It is relatively latent at room temperature but can represent a hazard if subjected to excessive heat (>40°C). The material should be ideally transported frozen and should be stored as indicated in the table on page 2.

SP9435 should be kept in a secured closed container (max. 25kg) during transport and storage. Any accidental spillage should be soaked up with sand, sawdust, cotton waste or any other absorbant material. The area should then be washed clean (see appropriate Safety Data Sheet).

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.

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:

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24-HOUR CHEMICAL EMERGENCY NUMBER

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