



# SP 4832

## Mono-component Epoxy System

### Introduction

SP 4832 is a highly thixotropic, gap filling paste. It is a single component epoxy system designed to co-cure at moderate elevated temperature with SP-High Modulus' SE preregs. The product is designed to be either applied between gel coat and prepreg in sharp recesses in order to bridge any large gaps between the two, or used as a highly effective low density core splicing adhesive. The colour is a very dark grey, to tone in with carbon preregs.

# Instructions for Use

## Mixing & Handling

SP 4832 resin is a pre-catalysed, mono-component system and therefore does not need to be mixed with another component. Because it is pre-catalysed, care should be taken with storage and handling. The system requires a temperature of 80°C to cure fully but some polymerisation, which will thicken the product and affect its handling properties, can occur at lower temperatures. To ensure safe use the product should not be used for a long time or stored at ambient temperatures above 40°C.

For long term storage, the product should be stored at -18°C in a freezer, but it can be kept at room temperature (20°C) for up to 20 days without affecting the handling and cured properties too much. 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.

## 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 pre-mixed system is available in cartridges that fit a standard mastic gun, or it 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 but in a controlled manner without runaway exotherm and so large volumes in thicknesses up to 25mm can be applied safely.

SP 4832 is resistant to sag even in thicknesses up to 20-25mm on a vertical surface. It retains its outstanding thixotropy even at elevated temperature.

## Curing

The system is designed to co-cure with SP-High Modulus' SE prepregs / SPRINT® Materials.

A typical cure cycle is 12 hours at 80°C. Other cure times & 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.

# Properties

Physical properties	
Resin appearance	dark grey paste
Resin viscosity (@ 25°C)	750 P - 950 P
Resin density (@ 25°C)	0.66-0.70g/cc
Sag resistance	t.b.a.

Cured density	0.66-0.72
Tg1 DMTA (12 hours/80°C)	86°C
Tg2 DMTA (12 hours/80°C)	99°C
Peak exotherm	124°C (1°C/min to 80°C; 12 hrs at 80°C)
<b>Bond Strength to Nomex Honeycomb</b>	
node orientation	t.b.a. N/mm2
ribbon orientation	t.b.a. N/mm2
Bond strength to P1200 Corecell	3.01 N/mm2 (flat wise tensile)

## Health and Safety

The following points must be considered:

1. Skin contact must be avoided by wearing protective gloves. SP-High Modulus 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**

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- **before smoking**

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- **before using the lavatory**

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- **after finishing work**

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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.

SP-High Modulus produces a separate full Material Safety Data Sheet for all hazardous products. Please ensure that you have the correct MSDS to hand for the materials you are using before commencing work. A more detailed guide for the safe use of SP-High Modulus resin systems is also available from SP-High Modulus and can be found on our website at [www.gurit.com](http://www.gurit.com)

## Applicable Risk & Safety Phrases

**R: 36/38, 43, 51/53**

**S: 7/8, 24, 26, 28, 37/39, 57**



## Transport & Storage

SP 4832 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 ideally be transported frozen and should be stored at -18°C. Its shelf life at -18°C is 12 months, and 20 days at room temperature.

SP 4832 should be kept in a secured closed container (max. 25 kg) 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).

## Notice

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