SP9435

Mono-component Epoxy System

Introduction

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

Mixing & Handling

SP 9435 resin is a mono-component system and therefore does not need to be mixed with another component.
For long term storage, the product should be stored at -18°C in a freezer, but it can be stored at room temperature (20°C) for up to 20 days. 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

Resin appearance	white paste
Resin viscosity (@ 25°C)	1200 ± 200 P
Gel time (120°C hot block)	31 ± 4 mins

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 mixed 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 but in a controlled manner without runaway exotherm and so large volumes can be safely applied. SP 9435 is resistant to sag even in thicknesses up to 5mm on a vertical surface. It retains its outstanding thixotropy even at elevated temperature.

Curing

The system is designed to co-cure with Gurit's SE prepregs. 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 @ 85°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

Tg (from specified cure cycle)	101 ±4°C
Ultimate Tg	101 ±4°C
Tg (from 10hrs @ 85°C)	101°C
Ultimate Tg	101°C

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

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

Health and Safety

The following points must be considered:

1. Skin contact must be avoided by wearing protective gloves. Gurit recommend the use of disposable Nitrile 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, or 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 works areas. Respiratory protection should be worn if there is sufficient 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 and to finish, washing 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 using the lavatory
- before smoking
- 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.

Gurit produces a separate full Materials 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. There is also a Health and Safety guide for the use of epoxy resin systems available from Gurit, or on the company website: www.gurit.com.

Transport & 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 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 9435 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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