

S-Fair 600

EPOXY FAIRING SYSTEM

- **Sag resistance up to 35mm on vertical surfaces**
- **Easy to sand**
- **Simple 1:1 mix ratio by volume**
- **Available with two hardeners; Fast and Standard**
- **Density of 0.86-0.9 g/cm³**

INTRODUCTION

S-Fair 600 is a two component filler designed for filling and fairing large composite and metal structures such as hulls and decks.

It is easy to apply with excellent sag resistance of up to 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 2 hardeners; Fast and Standard, which enables the customer to tailor the working/cure time to the ambient workshop temperature.

INSTRUCTIONS FOR USE

MIXING AND HANDLING

S-Fair 600 resin is mixed with S-Fair 600 hardener in the following ratio:

S-Fair 600 resin	S-Fair 600 hardener (Fast & Standard)
1	1 (by volume)
100	64 (by weight)

With long term storage the S-Fair 600 can settle and therefore the resin and hardener containers will require stirring before dispense. The components should be mixed together preferably at 15-25°C - at lower temperatures the product thickens and is more difficult to mix. The components must be mixed thoroughly paying particular attention to the sides and bottom of the mixing vessel. Mixing of the components should continue until a uniform grey / green colour is achieved. Care should be taken to use a folding motion when mixing in order to minimise the likelihood of air entrapment in the system. Solvent free epoxies have a limited pot-life. Use from the pot quickly and do not mix more than can be used within 45 minutes (if using Standard Hardener) and 10 minutes (if using Fast Hardener).

APPLICATION

Before applying the product, ensure that the surface is clean, dry and free of dust, oil or grease. Steel surfaces ideally should be shot-blasted to Swedish Standard SA2.5 and coated with a suitable stabilising primer. The mixed system can be applied by trowel, pallet knife or other suitable dispenser.

The system can be applied in thicknesses up to 35mm (if using Standard Hardener) and 10mm (if using Fast Hardener) without fear of exotherm. As it is easy to sand, S-Fair 600 does not need to be fine-faired during application.

The ideal ambient temperature for application is 15-25°C. Below this temperature the components are difficult to mix and spread on the surface. Above 25°C the sag resistance of the fairing compound will be reduced proportionally to temperature increase. The working time of the fairing compound will also decrease with increase of temperature. Surface temperature must also be taken into consideration – in direct sunlight, metal surfaces can achieve high temperatures. A maximum surface temperature of 45°C is recommended. Minimum surface temperature also depends on relative humidity – application should not be made if the temperature is below or approaching the dew point.

If applying other solvent free epoxy products on top of the S-Fair 600 fairing system, they can be applied as soon as the surface is stiff enough. This is typically 3-5 hours (Standard Hardener) or 50 minutes to 1 hour (if using Fast Hardener) after fairing application, but depends on thickness of fairing and ambient temperature. If applied during this period, the need to sand the surface of the fairing compound is eliminated. If the system is left to cure for longer than 6-8 hours (Standard Hardener) or 2 hours (Fast Hardener) then it will need to be left for a further 8-10 hours (Standard Hardener) or 12 hours (Fast Hardener) and then sanded before overcoating.

PROPERTIES

Component Properties			
	Resin	Hardener	
		Fast	Standard
Density (g/cm ³)	1.04-1.09	0.65	0.66-0.70
Component colour	white	orange	green
Mixed appearance	-	orange	grey/green
Viscosity at 25°C (P)	170	100	110

Working Properties (mixed resin & hardener)			
	Hardener		
	Fast	Standard	
Mixed viscosity at 25°C (P)	TBC	150	
Working time at 15-25°C (hours)	TBC	2-3	
Sag resistance at 15-25°C (mm)	35	35	
Dry film density (g/cm ³)	TBC	0.86-0.9	
Thin film open time 15-25°C (hours)	TBC	5	
Earliest sanding time 15-25°C (hours)	5	16	

Cured Properties			
Hardener used	Fast	Standard	
Cure Schedule	7 days @ 20°C		
Tg1 by DMTA (°C)	54*	44	
Peak Tan Delta by DMTA	TBC	59	
Lap shear on steel (MPa)	TBC	12.6	
Shore D hardness - 24 hours	TBC	41	
Shore D hardness - 48 hours (2 days)	TBC	58	
Shore D hardness - 72 hours (3 days)	TBC	63	
Shore D hardness - 1 week	TBC	67	
Flexural modulus (GPa)	TBC	3.7	

*Tg₂ by DSC after 144 hours @ 21°C

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.

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. A more detailed guide for the safe use of Gurit resin systems is also available from Gurit, and can be found at www.gurit.com

TRANSPORT & STORAGE

The system should be kept in securely closed containers during transport and storage. Storage should be in a dry place out of direct sunlight. The temperature should be between 18°C and 25°C. Containers should be firmly closed. The hardeners, in particular, will suffer serious degradation if left exposed to air.

With long term storage the S-Fair 600 can settle and therefore the resin and hardener containers will require stirring before dispense.

SHELF LIFE

Adequate long-term storage conditions for both materials will result in a shelf life of two years for both the resin and hardeners.

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E gurit@gurit.com
W www.gurit.com