

## ELI-FIL FR 982 LIQUID STEEL

**PLEASE NOTE : In cold temperatures metal-filled epoxy compounds can thicken and become hard. To render soft and easily mixable, the large tub should be warmed whilst stirring continuously**

PRODUCT	A metal filled, two component epoxy Resin	
APPLICATION	By pouring / casting / brushing	
VISCOSITY / 25°C	Resin	: Non flowing / Thixotropic
	Hardener	: 900 - 1100 cps
	Mixed system	: Free flowing liquid
MIXING RATIO	<u>By Weight</u> :	<u>By Volume</u> :
	100 Parts of Resin	100 Parts of Resin
	10 Parts of Hardener	25,5 Parts of Hardener
COLOUR	Resin	: Metal Grey
	Hardener	: Clear
	Mixed system	: Metal Grey
SPECIFIC GRAVITY / 25°C	Resin	: 2,6 - 2,8 g/cm <sup>3</sup>
	Hardener	: 1,04 - 1,08g/cm <sup>3</sup>
	Mixed system	: 2,3 - 2,5 g/cm <sup>3</sup>
COVERAGE 450g PACK (1mm thick casting)	0,18 - 0,19m <sup>2</sup>	
RECOMMENDED MIXING TIME / 25°C	3 - 5 Minutes	
GELTIME / 25°C (3mm thick casting)	15 - 20 Minutes	
WORKABLE POTLIFE 500g mass / 25°C	14 - 16 Minutes	
SETTING TIME / 25°C (3mm thick casting)	35 - 45 Minutes	
HARDNESS (cured 1h / 25°C) (3mm thick casting)	Shore D 80 - 85	
HARDNESS (cured 24h / 25°C) (3mm thick casting)	Shore D 85 – 90	
TEMPERATURE RESISTANCE	Typical 70 - 80°C	

CURE SHRINKAGE  
(A.S.T.M. D2566)

Very low (typical 0,004 - 0,006 cm/cm)

TYPICAL MECHANICAL AND ELECTRICAL PROPERTIES

TENSILE STRENGTH (DIN 53455) 20 - 25 MPA

COMPRESSIVE STRENGTH (DIN 53454) 60 - 65 MPA

FLEXURAL STRENGTH (DIN 534529) 40 - 45 MPA

SHEAR ADHESION : TO MILD STEEL : 8 -10 MPA

DIELECTRIC STRENGTH : Typical 25 volts / mil  
(A.S.T.M. D148)

TYPICAL CHEMICAL PROPERTIES

Cured 7 days / 25°C

Immersion 1 month

RESISTANCE TO

Sulphuric Acid 10%)  
Hydrochloric Acid 10%) good  
Sodium Hydroxide 10%)  
Ammonia, Oil, Grease, Water)  
cleaned Detergents, concentrated ) very good  
Acids / Alkaline, tests are recommended

SOLVENTS

Petrol, Benzol Benzene : good  
chlorinated Hydrocarbons, Esters, Ketones:  
Tests are recommended

STORAGE STABILITY

12 months stored under dry and cool conditions

TOXICITY

Very low toxicity at ambient temperatures. However, gloves should be worn and adequate ventilation must be ensured during application.

PROPERTIES AND USES

Eli-Fil FR982 liquid steel is the pourable / brushable version of the FR912 steel putty. The product is slightly thixotropic and can therefore be applied on curved, and in a thin films (1mm) on vertical surfaces. The Eli-Fil FR982 can be worked with normal tools, e.g. drilled, tapped, filed and is suitable for the following applications : to repair, rebuild and fill cavitated pumps, housings, impellers, stages. To fill blow holes, irregularities on castings, machines, tanks, to bond various metals and for making tools, jigs, key ways, moulds and models, to coat steel surfaces against erosion / corrosion. To line steel components as corrosion and abrasion protection / sealing.

NOTICE

The technical specification and/or our technical advice whether verbal, in writing or by trials is given in good faith and based on our test results obtained but without warranty. It does not release the user from

the obligation to test the products supplied by us or any third party as to the suitability for the intended application. The application, use and processing of the products are beyond our control and Elite Chemical Industries (Pty) Ltd's legal obligation in respect of any sale of its products shall be determined by the terms of its conditions of sale. NOVEMBER 1998