



resoltech
ADVANCED COMPOSITE TECHNOLOGY

1800

INJECTION & INFUSION EPOXY RESIN SYSTEM

RESOLTECH 1800 is an advanced infusion and injection epoxy resin system with an extremely low viscosity (180mPas) for fast and safe wetout by infusion and injection.

It features high mechanical properties, a TG of up to 130°C and up to 5H30 of infusion or injection time.

A great property of the system is its constant low viscosity right until gel time. It therefore offers reliable impregnation and air release throughout the infusion or injection process. Suitable for very large composite parts.

MIXING RATIO

The mixing ratio is constant whatever the hardener selected.

By weight: 100 + 17.

By volume: 5 + 1.

Hardeners available: 1808 fast and 1805 slow.

WARNING: The mixing ratio must be accurately followed. It is not possible to change the ratio, it would result in lower mechanical properties. The mixture should be thoroughly stirred to ensure full homogeneity.

It is important to note that epoxy systems tend to heat up much faster in a pot than as a thin film. It is therefore necessary to only mix the necessary amount usable within the given pot life. Keeping the mixture in flat open containers reduces the risks of exothermic reaction.

APPLICATION

The standard procedure of working with epoxy systems applies to the RESOLTECH 1800.

The system can be applied infused or injected.

For more information, please refer to the applications technical bulletins (TechNotes), available on request.

CURING

Workshop conditions: 18 to 25°C, 70% humidity maximum.

Hardener	Pot life	Release time	Optimal cure
1805 SLOW	2 hours	8 hours minimum	24h @ 20°C + 15h @ 70°C
1808 FAST	50 mn	4 hours minimum	24h @ 20°C + 15h @ 70°C

Pot life given for 70g @ 25°C.

Release time given for a temperature of 22°C.

MECHANICAL PROPERTIES

Tensile strength	<u>1805</u> 25MPa	<u>1808</u> 59MPa	ASTM D-638/ISO 527
Flexural strength	120MPa	102MPa	
Elasticity Modulus	2900MPa	2400MPa	
Elongation at break	2.4%	6.6%	
Water absorption	<0.15%	0.17%	1 month @ 23°C
Max Tg:	130°C	83°C	
Shore hardness	86	78	

Above values given for a cure of 24h @ 20°C + 15h @ 70°C

PHYSICAL PROPERTIES

Resin aspect:	pale yellow liquid
Hardener aspect:	Clear liquid
Resin viscosity	850mPas
Hardener viscosity	3 to 20 mPas
Viscosity of mixture	180mPas for 1808 and 290mPas for 1805
Density of mixture	1.1
Exothermic peak	> 230°C

Above values given at 22°C.

PACKING & STORAGE

Resoltech 1800 is available as follow:

1.16kg, 5.8kg, 34.8kg, 232kg.

Shelf life is one year in sealed containers as provided. Keep containers sealed and away from heat and cold.

HEALTH AND SAFETY

It is advised to follow basic rules such as avoiding skin contact, wear masks when producing dust. Please read our standard health and safety sheet for more information.

In case of eye contamination, wash with water and seek medical advice.

More information is available on www.resoltech.com.

The data provided in this document is the result of tests and is believed to be accurate. We do not accept any responsibility over the mishandling of these products and our liability is limited strictly to the value of the products we manufacture and supply.

RESOLTECH SARL
resolving your engineering challenges
www.resoltech.com

35 Impasse Emeri. Pole d'activites. 13510 Eguilles. France
export@resoltech.com Tel: +33 (0)442 950195 Fax: +33 (0)442 950198