

RESOLTECH 1600

Hardener 1606

Flexible Epoxy System

- Flexible laminating system
- Room temperature curing
- High impact resistance
- **New formula without CMR**



RESOLTECH 1600 / 1606 system results of the latest advances in epoxy chemistry formulation and enables to obtain a flexible epoxy retaining all the added values of epoxy resins: high adhesion, high toughness, but none of the aging issues in the older flexible formulations. The latest system is a high performance **epoxy laminating system** that cures at room temperature. It is formulated for the realisation of flexible laminates that need a high flexibility and improved impact resistance. The hardener has been reformulated in order to guarantee the absence of CMR components.

Its main characteristics are :

- Excellent wettability
- Excellent adhesion on all substrates
- Comfortable working time

Typical applications :

- Flexible carbon rods
- Flexible light RTM counter moulds when mixed with 1050 resin
- Decoration & upholstery items
- Rally car parts
- Sensors encapsulation
- Fibre reinforced membranes

Hardener 1606

MIXING RATIO

System	1600 / 1606
Mixing ratio by weight	100 / 126

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 mechanically stirred during no less than 5 minutes to ensure full homogeneity.**

APPLICATION

The standard procedure of working with epoxy systems applies to 1600 / 1606 laminating system. Mixing the resin and hardener should be done at a temperature close to 18-25°C. A lower temperature will increase the mixed viscosity as well as its potlife. On the contrary a higher temperature will decrease the mixed viscosity and the potlife will be reduced.

It is recommended to conduct a preliminary test before validation at industrial level.

PHYSICAL PROPERTIES

Visual aspect

- 1600 : Clear colorless liquid
- 1606 : Orange clear liquid
- Mix : Slightly orange clear liquid

Densities according to ISO 1675 (± 0.03)

References	1600	1606
Density	1.14	1.00
Mixed density	1.06	

Viscosities according to ISO 12058.2 ($\pm 15\%$)

References	1600	1606
Viscosity	600mPa.s	350mPa.s
Mixed viscosity	500mPa.s	

REACTIVITY

System	1600 / 1606
Reactivity on 70mL at 23°C (thickness ~4cm)	3h40min
Time at exothermic peak on 70mL at 23°C	1h47min
Temperature at exothermic peak on 70mL at 23°C	39.2°C
Gel time on 2mm film at 23°C	5h30min

Measurements made with Rheotech®

CURING & POST-CURING

RESOLTECH 1600 / 1606 system cures at room temperature.

A post curing-cycle of 16 hours at 60°C could be performed in order to achieve rapidly final thermo-mechanical properties.

System	T _g after 14 days at 23°C
1600 / 1606	< 0°C

Measurements made with Kinetech®

CARACTERISTIQUES MECANIKUES

Hardness according to ISO 868

System	1600 / 1606
Shore D Hardness after 14 days at 23°C	44
Shore D Hardness after 16 hours at 60°C	46

Intermediate Hardness obtained by mixing 1600 / 1606 with 1050 / 1056S epoxy system

Ratio 1600 / 1606	100	75	50	25	0
Ratio 1050 / 1056S	0	25	50	75	100
Shore D Hardness after 24h at 23°C + 16h at 60°C	46	58	80	84	90

Note : it is recommended to weigh and mix each system before mixing them together in the proportions indicated in the table above.

Resin 1600

Hardener 1606

Technical Datasheet - V2.1 - 24.08.2016
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Tensile properties according to ISO 527

System	1600 / 1606
Tensile modulus	2.6 MPa
Tensile strength at break	1.2 MPa
Elongation at break	72 %

Pure resin samples tested at 23°C after post-curing 16h at 60°C

PACKAGING

Available kits of 1600 / 1606 :

- 0.9kg : (0.4+0.5)kg
- 1.8kg : (0.8+1)kg
- 9kg : (4+5)kg
- 45kg : (20+25)kg
- 342kg : (152+190)kg

TRANSPORT & STORAGE

Keep containers sealed and away from heat and cold preferably between 10°C and 30°C in a well ventilated area. Our products are guaranteed in their original packaging (check expiry date stated on the label).

HEALTH & SAFETY

It is advised to follow basic rules such as avoiding skin contact, wear masks & gloves. Please read our standard Material Safety DataSheet for more information. In case of eye contamination, wash with water and seek medical advice.

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.