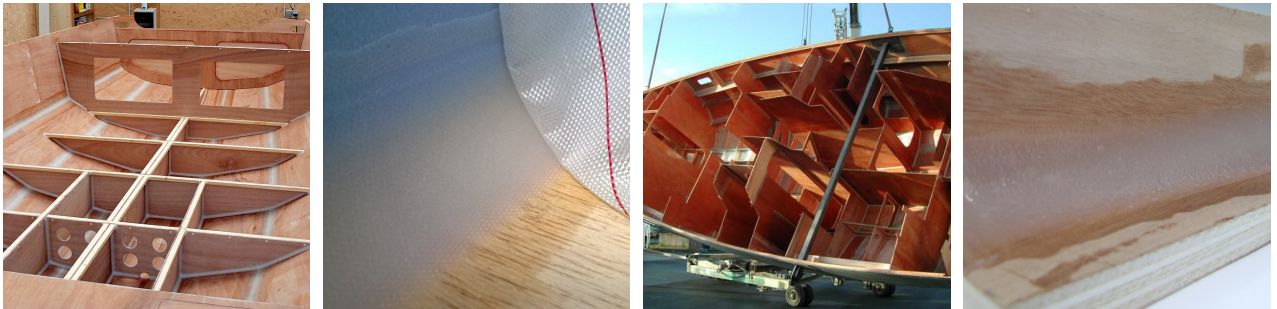


resoltech 2040 G

Hardeners 2045 G & 2049 G

Structural Adhesive Epoxy for wood bonding & Structural Fillet Joints



- Easy 4/1 mixing ratio by weight
- Ambient temperature curing
- Adjustable Pot life
- Applicable in high humidity conditions

INTRODUCTION

The **RESOLTECH 2040G / 2045 G & 2049 G** is a structural adhesive paste specifically formulated for fillet joints on wood. It is also commonly used as general purpose structural wood adhesive, specially on vertical or overhanging surfaces thanks to its cohesion and high adhesion properties.

The system can be ordered with two different hardeners, **standard (2045 G) and fast (2049 G)**. Both of them have the same mixing ratio and are fully compatible with each other, offering the possibility to be mixed together in order to obtain intermediate pot life.

For good visual control of the mixture, 2040 G is beige/cream-colored, and 2045 G and 2049 G hardeners are mahogany-brown. After mixing the 2 components, a mahogany-brown color is obtained.

The RESOLTECH 2040 G system cures at room temperature (with a T_g of 50°C), excellent wettability on wood and good bond strength in tension.

For an increased resistance and durability of the wood, we recommend to prime all woods with our water based epoxy **RESOLTECH 1010 / 1014**.

MIXING RATIO

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.

Systems	2040 G / 2045 G	2040 G / 2049 G
Mixing ratio by weight	100 / 25	

APPLICATION

- It is recommended to use products at a temperature close to 18-25 °C in order to facilitate the mixing and the reinforcements impregnation.
- Lower temperatures will increase the viscosity of the mixture and the gel time, but the resin will not crystallize at low temperatures.
- On the contrary, a higher temperature will reduce the viscosity of the mixture as well as the pot life.
- Substrates must be clean, dry and free of grease and dust.
- Mix the two components thoroughly. For larger quantities, a drill-mounted agitator is required (mix for 5 effective minutes).
- Apply the filler using a rounded spatula or other tool specifically designed for this application.
- A peel-ply can be applied to the uncured fillet joint to avoid sanding, and removed before laminating or painting.
- Consumption depends on the radius of the joint. As an example, the average consumption for a 30 mm radius fillet joint is 200 to 250 g for 1 linear meter applied on two square.

PHYSICAL CHARACTERISTICS

1 Visual aspect

2040 G :

Thixotropic neutral color paste

2045 G & 2049 G :

Brown thixotropic gel

Mix :

Brown thixotropic gel

2 Density

References	2040 G	2045 G	2049 G
Density at 23 °C	1.20	1.00	1.00
Mix density at 23 °C	-	1.15	1.15

ISO 1675, ± 0.05 tolerance

REACTIVITIES

Systems	2040 G / 2045 G	2040 G / 2049 G
Gel time on 70 mL at 23 °C* (4cm high)	1h20min	18 min
Time at exothermic peak on 70 mL at 23 °C	1h20min	23min
Temperature at exothermic peak on 70 mL at 23 °C	61°C	141°C
Gel time on 2 mm film at 23 °C*	9h	3h

* Gel time measurements realized with Rheotech*

RETICULATION & POST-CURING

In order to obtain the maximum thermo-mechanical properties, it is necessary to respect the recommended curing cycle. The table below shows the glass transition temperatures (DSC) according to different curing cycles.

Systems		2040 G / 2045 G	2040 G / 2049 G
14 days at 23 °C	T _g	50°C	50°C
	Shore D Hardness	85	85
T _g max		69°C	65°C

T_g measured by DSC, 10 °C/min, inflexion point
Shore D hardness measured at 23 °C according to ISO 868

Post-curing cycles previously presented were chosen in order to reach the maximum potential of each systems. Depending on parts size, oven performance and hardener used, shorter post-curing cycles could lead to fully cured parts.

Please contact our laboratory service for any help on post-curing cycles.

MECHANICAL PROPERTIES

Systems		2040 G / 2045 G	2040 G / 2049 G
14 days at 23 °C	FLEXION		
	Modulus	2.9 GPa	3.1 GPa
	Maximum strength	45.6 MPa	46.5 MPa
	Elongation at max strength	1.7%	1.6%
	Elongation at break	1.7%	1.6%
14 days at 23 °C	TENSILE - SHEAR		
	Bois / Bois	Rupture dans le bois	Rupture dans le bois
	Aluminium / Aluminium	6 MPa	-

Flexion properties on pure resin according to ISO 178

PACKAGING

- Metal box kit of 1kg + 0.25kg
- Metal bucket kit of 3.8kg + 0.95kg
- Metal bucket kit of 16kg + 4kg

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 on the label).

HEALTH & SAFETY

Skin contact must be avoided by wearing protective nitrile gloves & overalls or other protective clothing. Eye protection should be worn to avoid 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.

Ensure adequate ventilation in work areas. Respiratory protection should be worn with ABEKP coded filters.

Resoltech issues full Material 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.



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.



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