

resoltech 2040G **ECO**

Hardeners 2045G **ECO** & 2049G **ECO**

Structural Adhesive Epoxy for Wood Bonding, Structural Fillet Joints & Composites



- 60% biobased on resin part*
- Easy 4/1 mixing ratio by weight
- Ambient temperature curing
- Adjustable pot life
- **Applicable in high humidity conditions**

*ratio of the number of biobased carbon atoms / the number of total carbon atoms

INTRODUCTION

RESOLTECH 2040G ECO is a structural adhesive paste specifically formulated for fillet joints on wood and composites. 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.

Its thixotropy ensures no sagging on vertical walls, while maintaining great ease of application and smoothing.

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

The 2040G ECO will cure at room temperature and can be used in high humidity conditions. The mechanical properties of the 2040G ECO (high resistance in traction/shearing) enable to obtain durable structural fillet joints.

With up to 60% of biobased carbon atoms on the resin, use 2040G ECO will **improve biobased content** of wooden structure and composites.

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

MIXING RATIO

The mixing ratio must be respected neither excess nor default.
The mixture should be homogeneous and intimate with the use.

Systems	2040G ECO / 2045G ECO	2040G ECO / 2049G ECO
Mixing ration by weight	100/25	

APPLICATION

- It is recommended to use products at a temperature between 18 and 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.
- **Hardener 2045G ECO is sensitive to moisture, use quickly after opening.**

General conditions of application of RESOLTECH 2040G ECO

The mixing ratio must be accurately followed. It is not possible to change the ratio, it would result in lower thermo-mechanical properties.

Do not use 2040G ECO at a temperature lower than 10°C

It is recommended to carry out a test before any industrial application

Substrates must be dry and free of grease and dust

The mixture should be thoroughly stirred to ensure full homogeneity. If mixing large quantities it is recommended to use a mechanical stirrer during 5 effective minutes.

Fillet joints

The system can be applied by round trowel for fillet joints, squeegee or spatula over most materials. A peel ply can be applied to the uncured fillet joint to avoid sanding, it will be removed before lamination or painting.

BIOBASED CARBON ATOMS MASS CONTENT

References or mix	2040G ECO	2045G ECO	2049G ECO	2040G ECO 2045G ECO or 2049G ECO
Biobased carbon atoms mass content*	60%	29%	26%	52%

*ratio of the number of biobased carbon atoms / the number of total carbon atoms

PHYSICAL CHARACTERISTICS

1 Visual aspect

2040G ECO :

Thixotropic neutral color gel

2045G ECO & 2049G ECO :

Brown thixotropic gel

Mix :

Brown thixotropic gel

2 Density

References	2040G ECO	2045G ECO or 2049G ECO
Density at 23°C	1.07	1
Mix density at 23°C	-	1.06

ISO 1675, ± 0.05 de tolerance

REACTIVITIES

Systems	2040G ECO / 2045G ECO	2040G ECO / 2049G ECO
Gel time on 70mL at 23°C (4cm high)	1h51min	24min
Time at exothermic peak on 70mL at 23°C	1h30min	30min
Temperature at exothermic peak on 70mL at 23°C	46.0°C	151.4°C

Reactivity measurements realized with Rheotech*

RETICULATION & POST-CURING

Systems		2040G ECO / 2045G ECO	2040G ECO / 2049G ECO
14 days at 23°C	T _g	38°C	51°C
	Shore D Hardness	83	84
T _g max		57°C	67°C

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

MECHANICAL PROPERTIES

Systèmes		2040G ECO / 2045G ECO	2040G ECO / 2049G ECO
14 days à 23°C	FLEXION Modulus	1.8 GPa	2.7 GPa
	Maximum strength	40.2 MPa	45.9 MPa
	Elongation at maximum strength	4.8%	2.0%
	Elongation at break	5.5%	2.0%

Flexural 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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