

RESOLTECH 8050

Hardener 8058

Epoxy profiling & fairing filler

- Simple mixing ratio 1:1 by weight or volume
- Easy sanding
- Fast curing
- Lightweight: 0,8 density



RESOLTECH **8050 / 8058** is a fast curing, lightweight, and easy sanding epoxy filler. It is a premium choice for profiling & fairing above and below the waterline for professional applicators on steel, aluminum and composite materials.

The specially formulated lightweight epoxy filler will apply from very thin layers up to 25 mm in one coat without the risk of sagging/slumping. This filler will result in a high strength and impact resistant watertight surface.

The formulation of the **8050 / 8058** will help improve health and safety for the workers and follows the latest EU regulation (CE) n°453/2010 and does not contain any CMR materials.

When sanded, the surface of this system is smooth enough to be directly overcoated with RESOLCOAT **3010T / 3014T** high build epoxy primer and is compatible with all paints & primers.

RESOLTECH **8050 / 8058** fast curing characteristics enable applications of several layers a day with sanding between them, improving the productivity of the workers. It may be applied in covered facilities or outside as it offers little sensitivity to climate conditions. Its excellent waterproof property enables to guarantee long lasting barriers when used as osmosis treatment.

Easy to sand or mill with CNC, RESOLTECH **8050 / 8058** may be used as profiling filler on low density foams blocks for plugs manufacturing and tooling boards adhesive. RESOLTECH **8050 / 8058** is the product that offers long-term performance of superior quality.

Resin 8050

Hardener 8058

MIXING RATIO

System	8050 / 8058
Mixing ratio by weight	1 / 1
Mixing ratio by volume	

The mixing ratio must be respected neither excess nor default. The mixture should be thoroughly stirred to ensure full homogeneity. It is recommended to use flat spatulas & trowels to hand mix the resin & hardener on a flat surface to avoid air incorporation during the mix.

PHYSICAL CHARACTERISTICS

Visual aspect

8050 :	Blue paste
8058 :	Light white paste
Mix :	Light blue paste

Density (ISO 1675, ± 0.05)

References	8050	8058
Density at 23°C	0.80	0.80
Mixed density at 23°C	0.80	

Water absorption (ISO 62)

8050 / 8058 :	0.56 %
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REACTIVITY & HARDENING

System	8050 / 8058
Gel time on 70mL (~4cm thickness) at 23°C	18 min
Temperature at exothermic peak on 70mL at 23°C	48°C
Time at exothermic peak on 70mL at 23°C	20 min
Gel time on 2mm film at 23°C	45 min

Reactivity measurements made with Trombotech®

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	8050 / 8058					
Thickness	5mm		10mm		25mm	
Temperature	20°C	30°C	20°C	30°C	20°C	30°C
Can be sanded after	5h	4h	4h	3h30min	3h30min	2h30min

APPLICATION

It is mandatory to respect the mixing ratio, all excess or default will result in a loss of thermo-mechanical properties.

- **Substrate temperature** should be minimum 10°C and maximum 35°C. Product temperature should also be minimum 10°C and maximum 35°C. Ambient temperature should be minimum 10°C and maximum 35°C.
- **Surface preparation:** on previously painted surfaces, clean thoroughly to degrease the surface and sand with 80-180 grade paper or remove all previous coatings if in poor condition and prime the substrate.

Steel/Aluminum: Prime with RESOLCOAT 3010T / 3014T.

Wood: Prime stable constructions only, with RESOLCOAT 1010 / 1014.

GRP: For osmosis treatment, prime the sanded fibre with 1020L / 102xL in order to waterproof the substrate and lightly sand/deglaze before application of filler.

BARE GRP/COMPOSITE: Remove surface wax/mould release agent with degreaser, sand with 80-180 grade paper. If left for longer than 24 hours, two component epoxy primers and fillers will need sanding with 80-180 grade paper to ensure a good mechanical adhesion.

As general rule: all substrates must be sanded, clean and dry.

- **Mix** the two components thoroughly to an even colour. Remove any dust from the surface. Apply firmly in a spreading action. When hardened, sand smooth with 80-180 grade dry paper.
- **Overcoating:** RESOLTECH 8050 / 8058 may be overcoated with itself or with RESOLCOAT 3010T / 3014T as soon as it is cured enough.

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Coverage of application vs thickness

Coverage will depend on the thickness needed to profile. The following table indicates the average consumption vs thickness.

Thickness	Coverage
1mm	0.8 kg/m ²
5mm	4 kg/m ²
10mm	8 kg/m ²

Warning : On thick applications, with high temperatures it is recommended to test the desired thickness at application conditions & substrate temperature to ensure that no exothermic reaction occurs.

THERMO-MECHANICAL PROPERTIES

Glass transition temperature & Hardness

	Curing cycles	8050 / 8058
T_G (°C)	14 days at 23°C	47.1
Shore D Hardness		70
T_G (°C)	16h at 60°C	67.3
Shore D Hardness		72

T_G realized with Kinetech® (DMA type), Shore Hardness (ISO 868)

Flexural properties

	Curing cycles	8050 / 8058
Modulus (GPa)	14d at 23°C	1.04
	16h at 60°C	1.28
Max strength (MPa)	14d at 23°C	12.3
	16h at 60°C	18.7
Elongation at max strength (%)	14d at 23°C	1.6
	16h at 60°C	1.8

Tests realized according to ISO 178

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Temperature stability

Curing cycles	% of expansion over 1 cm (thickness)
After 2 h at 60°C	0.07%
After 2 h at 60°C + 2 h at 80°C	0.12%
After 2 h at 60°C + 2 h at 80°C + 2 h at 100 °C	0.34%
After 2 h at 60°C + 2 h at 80°C + 2 h at 100 °C + 2 h at 120°C	0.36%
After cooling untill 23°C	0.24%

These expansion values show that co-curing the **8050 / 8058** filler between layers of prepreg when manufacturing a complex shape with sharp angles is possible.

PACKAGING

Kits of 8050 / 8058 available :

- 1kg : (0,5+0,5)kg
- 5kg : (2.5+2.5)kg
- 30kg : (15+15)kg
- 300kg : (150+150)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 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 or hardener 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.

Nota : The data provided in this document are provided good-faith and are based on the test in laboratory and our practical experience and is believed to be accurate. Considering the application of our products gets away from our control, 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.