

RESOLTECH 6410(T)

Hardeners 6418 & 6419

Fast Curing All Weather Epoxy Laminating System

- Versatile laminating system for all-weather working conditions
- Room temperature curing
- Low viscosity for easy impregnation even at low temperatures



RESOLTECH 6410(T) / 6418 & 6419 is a high performance **epoxy laminating system** that **will work in adverse conditions** of high humidity and very low temperatures.

Its main characteristics of **low viscosity even at temperatures** below 10°C combined with a fast gel time at room temperatures makes the 6410(T) / 6418 or 6419 system a prime choice for renovation of pipes and drains and other civil engineering applications as well as for marine applications or any winter application.

Even in low applications temperatures below 10°C, the resin & hardener stay workable unlike other epoxies that would have a honey-like consistency at such low temperatures and would make their application impossible.

Its **exceptional wetting capability** and its good adherence characteristics thanks to the adhesion promoters it contains also make it possible to use this system as an adhesive in some applications.

6410T is a **thixotropic version** available for **vertical applications**.

MIXING RATIO

System	6410(T) / 6418	6410(T) / 6419
Mixing ratio by weight	100 / 20	

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 RESOLTECH 6410(T) / 6418 & 6419. Mixing the resin and hardener should be done at a **temperature between 10°C and 25°C**. The system can be applied **by brush, roller, infused or injected**.

In case of laminating over a cured surface without peel ply, it is required to deglaze, clean and degrease the support prior to laminating.

As with all epoxies, a lower application temperature will result in a higher viscosity and a longer pot life. On the contrary a higher application temperature will reduce the viscosity and as well as the pot life of the mix.

PHYSICAL PROPERTIES

Visual aspect

6410(T) : Transparent to slightly yellow liquid

6418 & 6419 : Yellow liquid

Mix : Slightly yellow liquid

Density at 23°C according to ISO 1675 (± 0.05)

References	6410(T)	6418	6419
Density	1.10	0.99	0.98
Mix density	-	1.05	1.04

Hardeners 6418 & 6419

Viscosity at 23°C according to ISO 12058.2 ($\pm 15\%$ tolerance)

References	6410(T)	6418	6419
Viscosity (mPa.s)	350	240	
Mix viscosity (mPa.s)	-	456	391

REACTIVITY

Thanks to its high reactivity the system is able to harden even when immersed in water.

System	6410(T) / 6418	6410(T) / 6419
Gel time on 70mL (4cm thickness) at 15°C	56min	45min
Gel time on 70mL at 23°C	14min	12min
Temperature at exothermic peak on 70mL at 23°C	157°C	145°C
Time at exothermic peak on 70mL at 23°C	16min	13min
Gel time in 2mm film at 23°C	1h24min	1h12min

Reactivity measurements made with Rheotech®

MECHANICAL PROPERTIES

Systems	6410(T) / 6418	6410(T) / 6419
Shore hardness after 16h at 60°C	88 Shore D	87 Shore D
T _G after 14 days at 23°C	53°C	55°C
T _G after 16h at 60°C	71°C	74°C
Water absorption	0.37%	0.37%

Shore Hardness according to ISO 868
T_G measurements realized on Kinetech®
Water absorption according to ISO 62

Systems	6410(T) / 6418	6410(T) / 6419
Flexural modulus after 14 days at 23°C	2.8 GPa	3.4 GPa
Max strength after 14 days at 23°C	86.6 MPa	78.6 MPa
Elongation at max strength after 14 days at 23°C	3.2 %	2.4 %
Flexural modulus after 16 hours at 60°C	2.9 GPa	3.1 GPa
Max strength after 16 hours at 60°C	100.0 MPa	106.5 MPa
Elongation at max strength after 16 hours at 60°C	4.9 %	4.7 %

Flexion according to ISO 178

PACKAGING

6410(T) / 6418 & 6419 available kits :

- 1.2 kg : (1+0.2) kg
- 2.4 kg : (2+0.4) kg
- 6 kg : (5+1) kg
- 30 kg : (25+5) kg
- 240 kg : (200+2x20) 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

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.

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.