

TECHNICAL DATASHEET

1810

(Resin 1811 + Hardener 1812)

Description

The product is suitable to bond metals like aluminium, steel, brass and its alloys as well as ferrite and combinations.

It is a two-component system and cures after mixing into a high-strength and impact resistant polymer film. The best mixture-ratio is 1:1 (volume) and is obtainable without problems by using the common double-cartridges.

Advantages

- Fast curing system
- High tensile shear strength
- Resists against impacts as well as against peeling
- Good gap-filling behaviour up to 0.5 mm
- Free of solvents
- Short fixture time and reliable curing

Product data

Chemical base	Modified urethane methacrylate
Curing system	2-Component-System
Mixing ratio by volume	1 : 1 (Resin 1811 : Hardener 1812)
Colour (after curing)	Black (dark purple)
Shelf life 50 ml cartridge	12 month at 4 – 23 °C
Shelf life 500 g bottle	6 month at 4 – 23 °C
Shelf life bigger packaging (≥ 2.5 kg)	3 month at 4 – 23 °C

Physical properties (uncured):

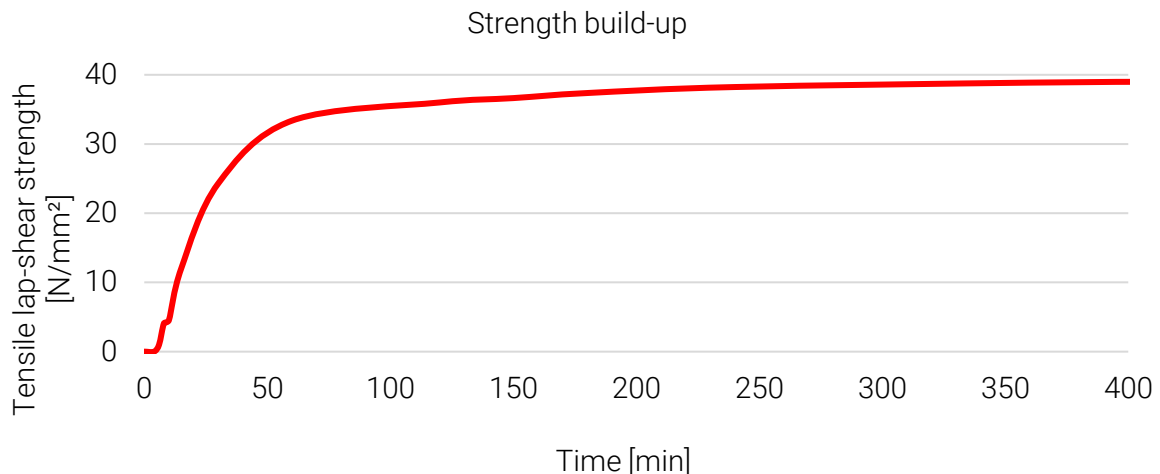
Viscosity Brookfield RVT, Sp. 6 at 25°C

Viscosity	Resin	1811	1 rpm	~ 125'000	mPa•s
			100 rpm	~ 4'500	mPa•s
	Hardener	1812	1 rpm	~ 125'000	mPa•s
			100 rpm	~ 4'500	mPa•s
Density	Resin	1811		~1.08	g/cm ³
	Hardener	1812		~1.11	g/cm ³
	Mixed			~1.10	g/cm ³
Colour	Resin	1811		Red	
	Hardener	1812		Green	

Curing properties:

Application temperature	+10 °C to +40 °C
Open time at 23°C	3 – 6 minutes
Fixture time at 23°C [~1 N/mm ²]	7 – 9 minutes
Functional strength at 23°C [~10 N/mm ²]	12 – 16 minutes
Final strength at 23°C	~ 12 hours
Volume shrinkage	~ 10 %

Tensile shear strength according to DIN EN 1465, at 23°C steel-steel corundum-blasted

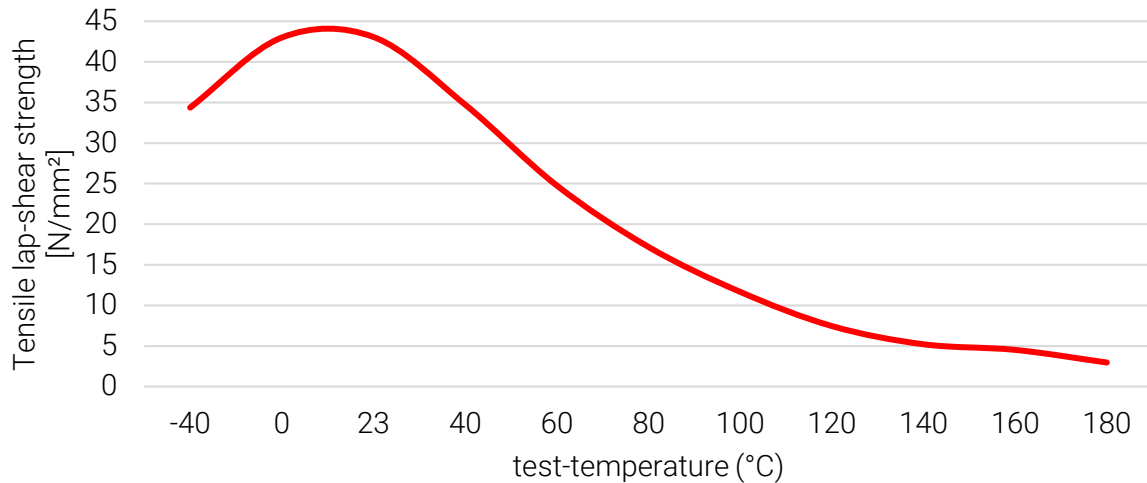


Physical properties (cured):

Usage temperature

- 40 °C to + 150 °C

Tensile lap-shear strength on steel (corundum-blasted) acc. to EN 1465,
after 72 hours at 23°C and 2 hours at mentioned test temperature



Glass transition point Tg	(TMA method)	~ 82 °C
	(DSC method)	~ 63 °C
Coefficient of expansion	< Tg	~ 180 ppm/K
	> Tg	~ 200 ppm/K
Flexural modulus (DIN EN ISO 178)		~ 670 N/mm ²
after 24 h at 23°C		
Tensile strength (ISO 527 1A)		~ 24 N/mm ²
after 24 h at 23°C		
Elongation at break (ISO 527 1A)		~ 35 %
after 24 h at 23°C		
Shore D hardness (DIN EN ISO 868)		~ 70

Tensile lap-shear strength (DIN EN 1465)

Curing: 24 hours at 23 °C, test temperature 23 °C, degreased and corundum blasted

Steel	> 37 N/mm ²
Stainless steel	> 32 N/mm ²
Aluminium	> 32 N/mm ²
Copper	> 17 N/mm ²
Brass	> 24 N/mm ²
CFRP Epoxy	> 16 N/mm ²
GFRP	> 17 N/mm ²

Chemical resistance

Excellent in

Hydrocarbons
Acidic solutions (> pH 3)
Alkaline solutions (< pH 10)
Salt solutions

Unstable in

Polar solvents
Strong acidic/alkaline solutions

Precautions

For your own safety, please refer to the information of the concerned MSDS and for the correct handling the "user instructions".

The information in this data sheet is based on the results of our research and experience. However, the suggestions herein concerning the use, application, and processing of the products (collectively, „the methods“) **are non-binding recommendations only**. It is the user's sole responsibility to determine the suitability and safety of these methods, based on the user's particular purpose in using the products. Before relying on the reliability and safety of any parts that are bonded using the products, it is extremely important that the user test the reliability and safety of the parts that are bonded. Failure to do so could result in serious personal injury. Because of the use of the products are within the purchaser's sole control, Kisling Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability or fitness for a particular purpose, arising from the sale or use of the products described herein. Kisling Corporation specifically disclaims any liability for consequential, incidental, or other damages of any kind, including lost profits. Kisling Corporation's liability for damages shall not exceed the purchase price of the products used.

TIS_1810_e/PC/05.04.2024