

TECHNICAL DATASHEET

1920

(Resin 1918 + Hardener 1919)

Description

This very low odour structural adhesive was developed to bond metals like aluminium, steel, brass and its alloys as well as ferrite, a wide range of plastics and combinations of those materials. 1920 is a two-component system and cures after mixing into a dry, high-strength and impact resisting polymer film. The best mixture-ratio is 1:1 (volume) and is obtainable easily by using the common dual-cartridges. Due to its insensitiveness to changing mixture ratios, it may be applied also as bead beside bead and mixed by hand or when parts are joined.

Advantages

- Relative long open time
- Fast curing means short fixture times and reliable, complete curing
- Excellent adhesion
- High tensile shear strength
- Resists against impacts as well as against peeling
- Resists again paint baking (stove enamel process)
- Compatible with spot welding procedure
- Contains 100µm spacer to optimize gap and mechanical properties
- Wide range of mixing ratio
- Relative low shrinkage
- Very low odour
- Free of solvents
- Non-flammable

Physical properties (liquid product)

Chemical base

Modified, toughened acrylate

Curing System

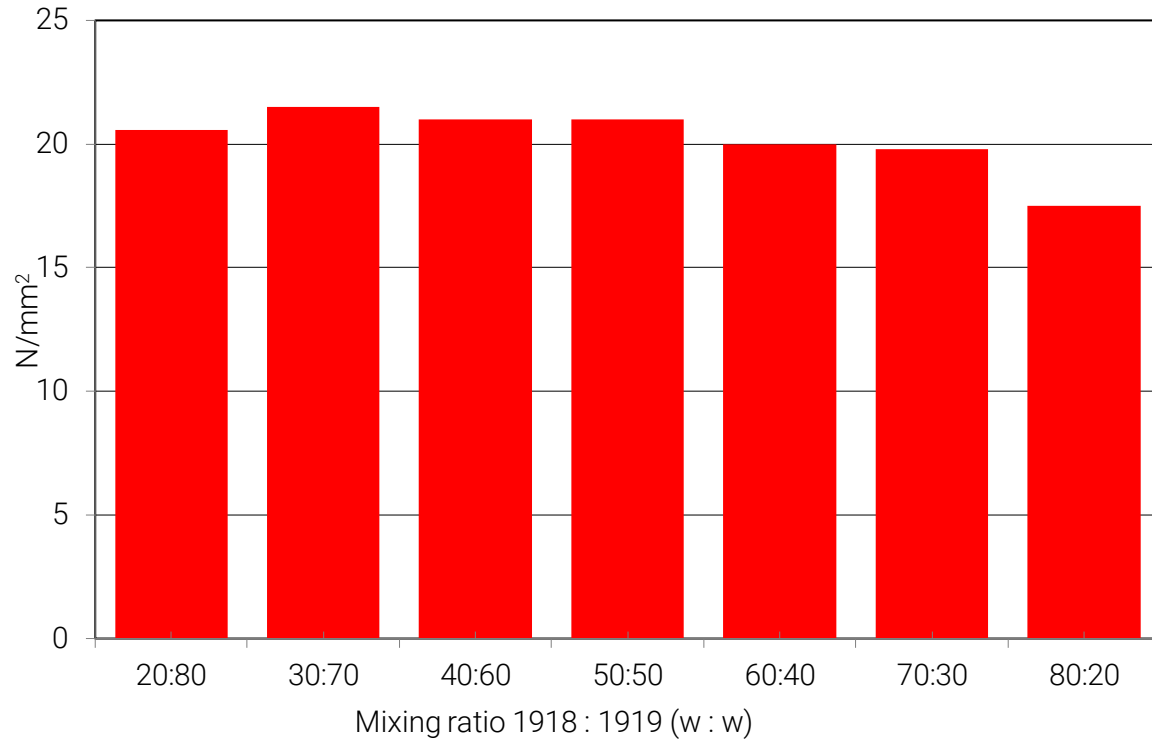
2-component-system

Mixing ratio by volume

1 : 1 (Resin 1918 : Hardener 1919)

Mixing ratio

tensile shear strength depending on various mixture ratios tested acc. to EN 1465 on steel



Colour	1918 1919 Mixture	Pale yellow Dark blue-green Dark brown-grey
Viscosity	1918 1919	~ 20'000 mPa•s ~ 20'000 mPa•s
Density	1918 1919	1.02 g/cm ³ 1.03 g/cm ³
Shelf life	50 ml cartridges	12 months at ≤ 25°C
Flash point		~ 101 °C

Curing properties

Pot life at 23°C; ~2g

Fixture time at 23°C (>1 N/mm²)

Final strength at 23°C

~ 7 minutes

~ 8 minutes

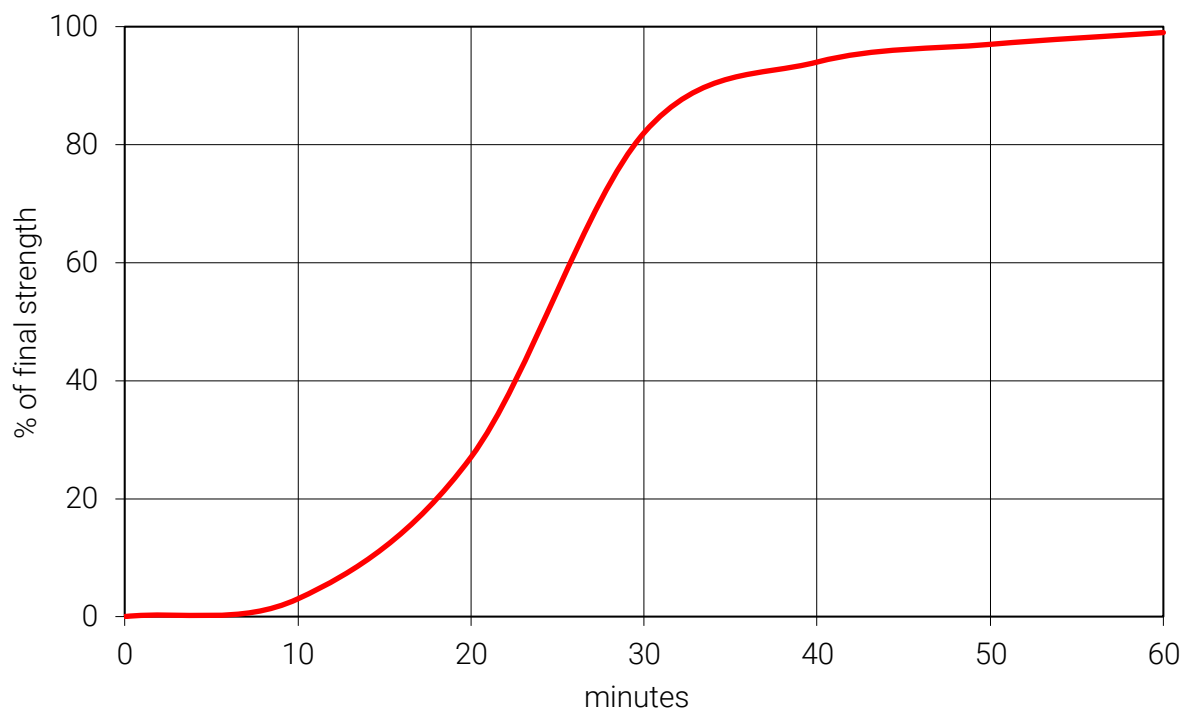
~ 2 hours

Shrinkage after curing

< 8%

Curing speed

Tensile shear strength on steel acc. to EN 1465

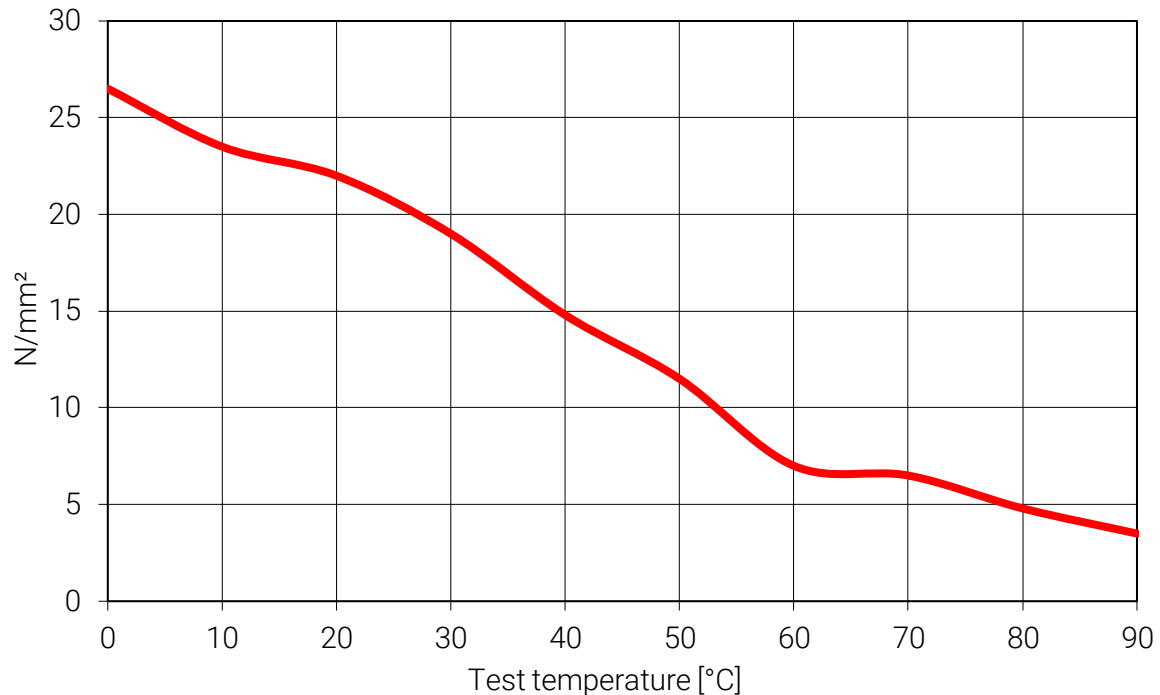


Physical properties (cured product)

Thermal range

- 40 °C up to 110 °C

Tensile shear strength at mentioned temperatures
after 24 hours at mentioned test temperature (EN 1465)



Tensile strength (ISO 527/1A/10)

~ 13 N/mm²

after 24 hours at 23°C

Elongation at break (ISO 527/1A/10)

~ 50 %

after 24 hours at 23°C

E-Modul DIN EN ISO 178

420 MPa

after 24 hours at 23°C

Impact resistance (steel, corundum blasted)

> 16 kJ/m²

steel, corundum blasted

Peel strength – floating roller (ISO 4578)

> 70 N/cm

steel, corundum blasted

Shore D hardness

~ 60

Tensile shear strength acc. to DIN EN 1465

12 hours at 23 °C; test temperature: 23 °C; metals corundum blasted / plastics cleaned

Stainless steel

> 22 N/mm²

Steel

> 21 N/mm²

Galvanized steel

> 22 N/mm²

Aluminium

> 18 N/mm²

Tensile shear strength acc. to DIN EN 1465

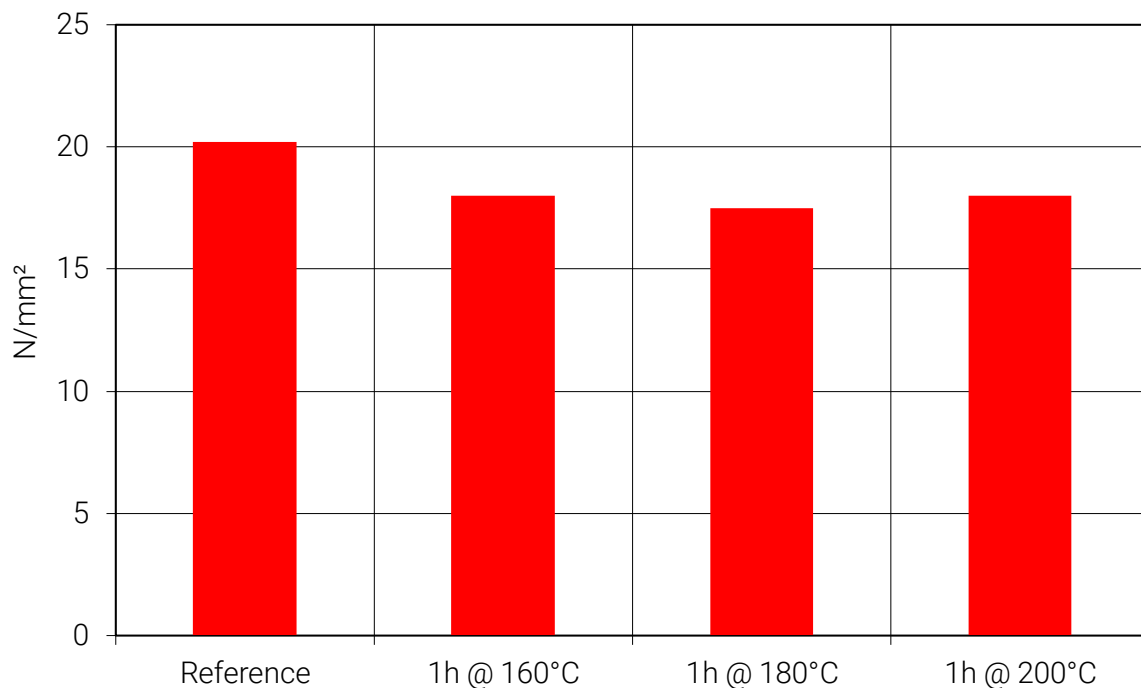
12 hours at 23 °C; test temperature: 23 °C; metals and composites corundum blasted / plastics cleaned

GFRP Epoxy >20 N/mm²
CFRP >20 N/mm²

ABS > 5 N/mm² (material failure)
PC > 4 N/mm²
PVC > 3 N/mm² (material failure)
PS > 2 N/mm² (material failure)

Resistance against short time heating

Tensile shear strength tested at room temperature (EN 1465)



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.

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