BONDING +
SEALING +
ENCAPSULATION

Kisling

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.

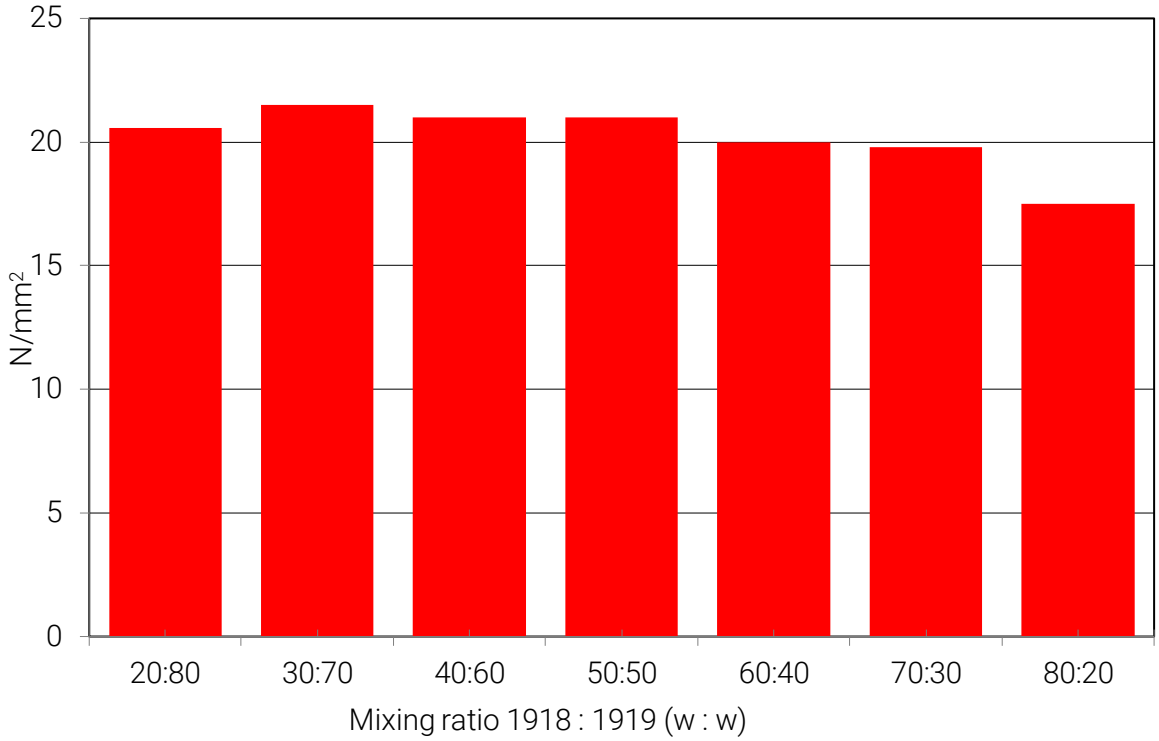
Advantages
- Relative long open time
- Fast curing means short fixture times and reliable, complete curing
- Excellent adhesion
- High tensile shear strength
- Resists against impacts as well as against peeling
- Resists again paint baking (stove enamel process)
- Compatible with spot welding procedure
- 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



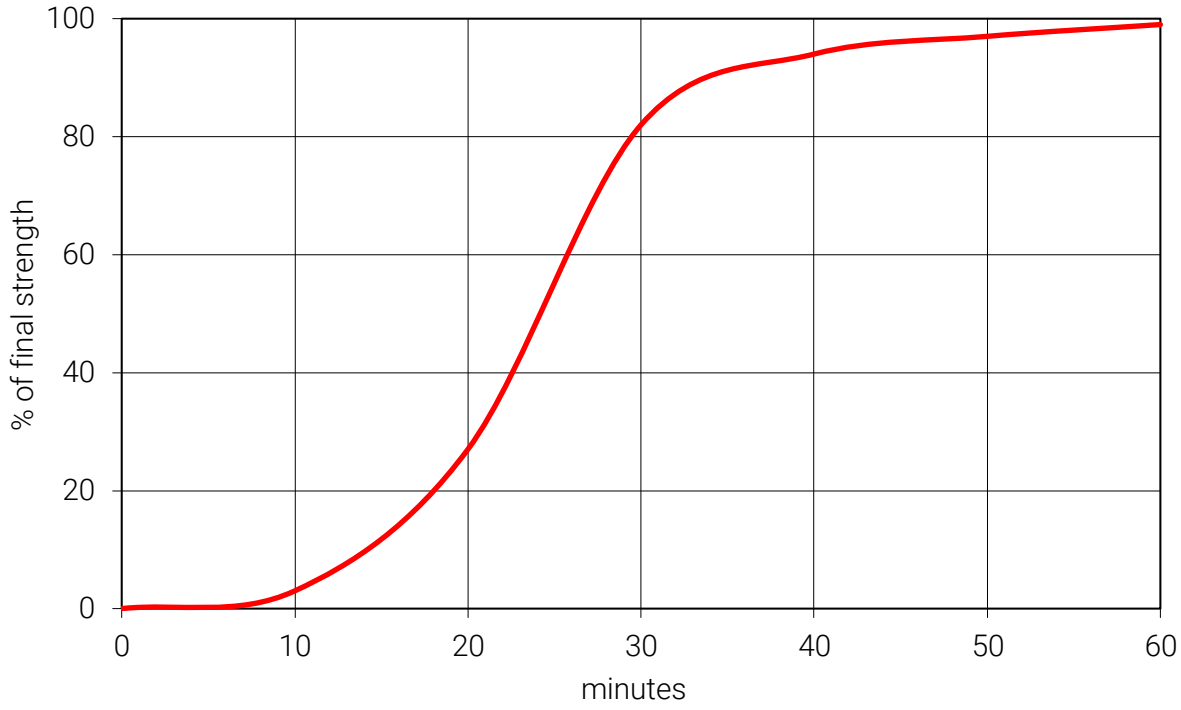
Colour	1918	Pale yellow
	1919	Dark blue-green
	Mixture	Dark brown-grey
Viscosity	1918	~ 20'000 mPa•s
	1919	~ 20'000 mPa•s
Density	1918	1.02 g/cm³
	1919	1.03 g/cm³
Shelf life	50 ml cartridges	12 months at ≤ 25°C
Flash point		~ 101 °C

Curing properties

Pot life at 23°C; ~2g	~ 7 minutes
Fixture time at 23°C (>1 N/mm^2)	~ 8 minutes
Final strength at 23°C	~ 2 hours
Shrinkage after curing	< 8%

Curing speed

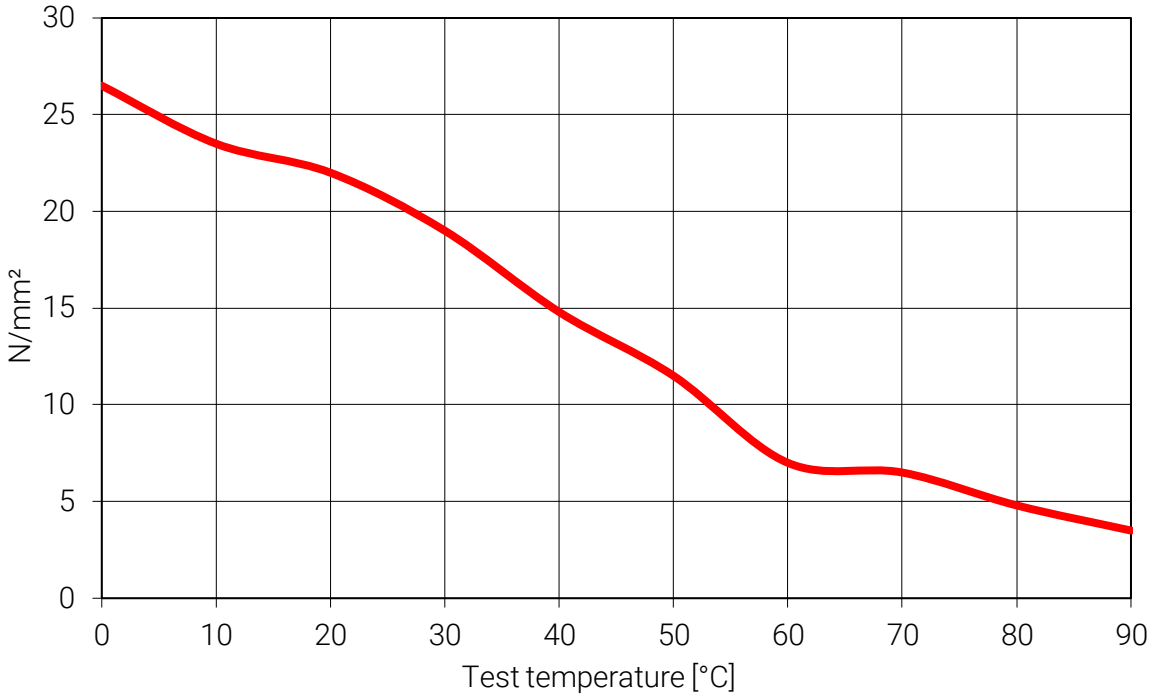
Tensile shear strength on steel acc. to EN 1465



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) after 24 hours at 23°C	~ 13 N/mm²
Elongation at break (ISO 527/1A/10) after 24 hours at 23°C	~ 50 %
E-Modul DIN EN ISO 178 after 24 hours at 23°C	420 MPa
Impact resistance (steel, corundum blasted) steel, corundum blasted	> 16 kJ/m²
Peel strength – floating roller (ISO 4578) steel, corundum blasted	> 70 N/cm
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

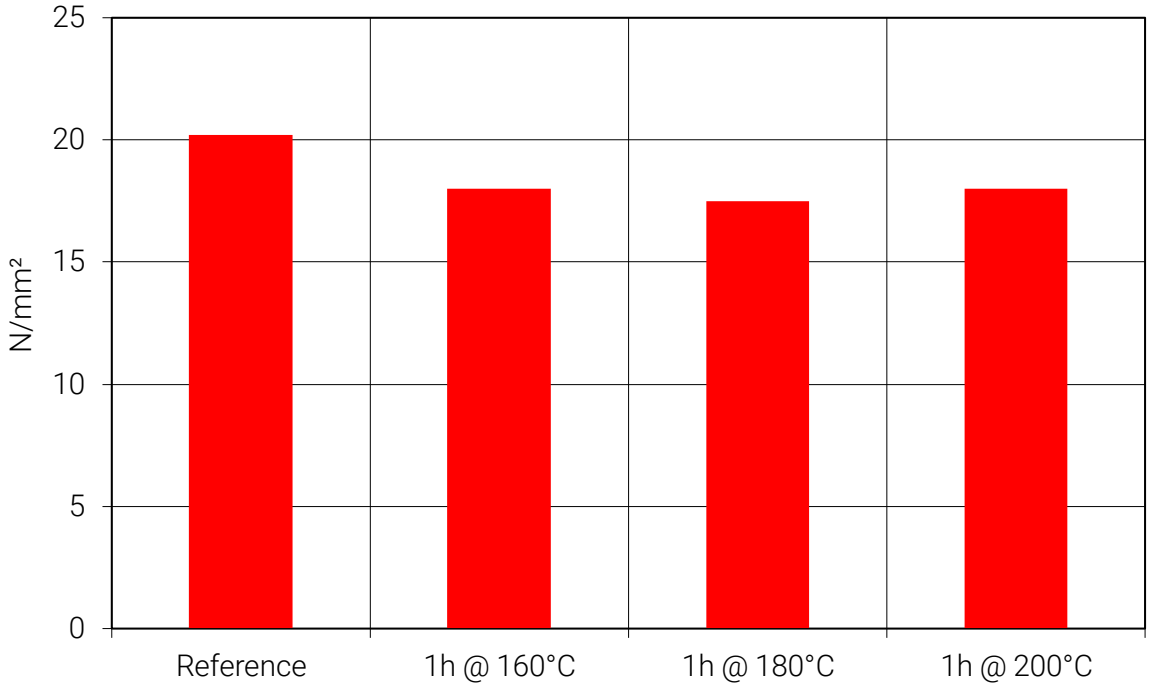
Tensile shear strength acc. to DIN EN 1465

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".

TIS_1920_e/PC/28.01.2022