

## TECHNICAL DATASHEET

### 7420

(Resin 7418 + Hardener 7419)

#### Description

7420 is a medium viscous, high strength, structural epoxy-adhesive for general purpose with a good adhesion to metals, ceramic, glass, rubber, hard plastics and a wide range of other common materials. Ideal for composite materials (e.g. "honeycomb-bonding"), repair, steel construction, magnet bonding, mould-, tool- and model making, sieve and filter technic as well as a potting compound.

**NSF S4 (formerly P1) listed for use in food processing area.**

#### Advantages

- Long open time
- For bonding a broad variety of materials
- Very good resistance against dynamic loads
- Excellent impact resistance
- Low shrinkage
- Highly aging-and chemical resistant

#### Physical properties (liquid product)

Chemical base			Epoxy resin adhesive
Curing System			2-component-system
Mixing ratio (volume)			1 : 1 (resin : hardener)
Mixing ratio (weight)			100 : 80 (resin : hardener)
Shelf life			24 months at 2 – 30 °C
Viscosity (mixture) acc. to DIN EN 12092 Brookfield cone/plate – system at 25°C, MK25, D=35 s <sup>-1</sup>			40'000 – 45'000 mPa·s
Density	Resin	7418	~ 1.21 g/cm <sup>3</sup>
	Hardener	7419	~ 0.98 g/cm <sup>3</sup>
	Mixture		~ 1.09 g/cm <sup>3</sup>
Colour	Resin	7418	Clear
	Hardener	7419	Yellowish
	Mixture		Off-white (cream-coloured)

**Curing properties**

Pot life at 23°C; ~5g ~ 100 minutes  
 Fixture time at 23°C (> 1 N/mm<sup>2</sup>) ~ 7 hours  
 Final strength at 23°C ~ 72 hours

Functional strength (> 10 N/mm<sup>2</sup>)  
 at 23°C ~ 10 hours  
 at 60°C ~ 60 minutes  
 at 100°C ~ 14 minutes

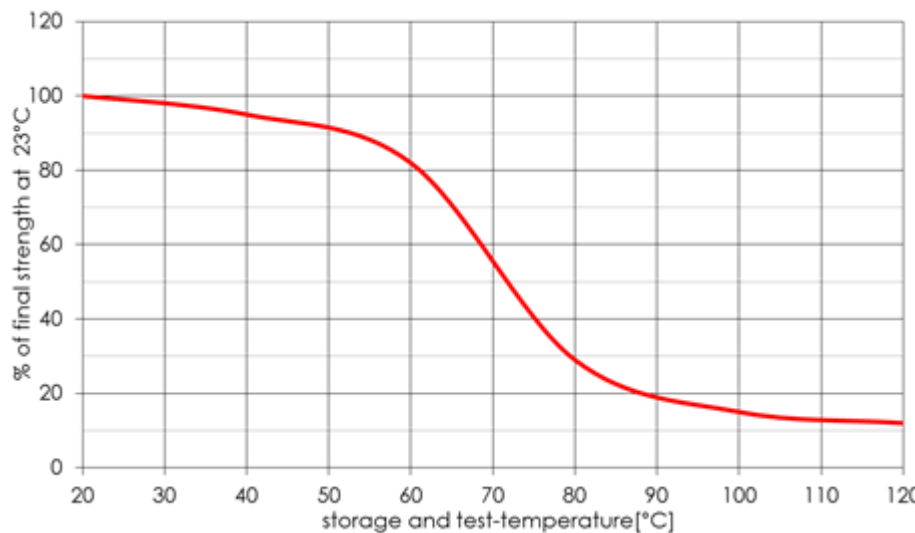
Volume shrinkage at 40°C ~ 3.8 %

**Physical properties**

Thermal range - 60 °C up to 100 °C

**Lap shear strength at different temperatures**

Curing: 16 hours at 40 °C, 24 hours at 23 °C; storage for 24 hours at test temperature; steel corundum blasted



Glass transition point 62°C  
 Shore D hardness ~ 70

Coefficient of expansion < T<sub>g</sub> 106 ppm/K  
 > T<sub>g</sub> 197 ppm/K

E modulus (DIN EN ISO 178/A) ~ 650 N/mm<sup>2</sup>  
 Shear strength (ISO 527-2/1A/10) ~ 24 N/mm<sup>2</sup>  
 Elongation at break (ISO 527-2/1A/10) ~ 10 %

Thermal conductivity ~ 0.20 W/(m•K)

Dielectric strength ~ 34.3 kV/mm

Tensile shear strength acc. to DIN EN 1465

Curing: 16 hours at 40 °C, 24 hours at 23 °C; test temperature: 23 °C; metals corundum blasted / plastics cleaned

Steel	> 30 N/mm <sup>2</sup>
Stainless steel	> 30 N/mm <sup>2</sup>
Aluminium	> 25 N/mm <sup>2</sup>
Brass	~ 25 N/mm <sup>2</sup>
Copper	> 20 N/mm <sup>2</sup>
GRP, epoxy	~ 24 N/mm <sup>2</sup>
ABS	> 5 N/mm <sup>2</sup>
Polyamide 6	~ 4 N/mm <sup>2</sup>
PC	~ 5 N/mm <sup>2</sup>
PMMA	~ 2 N/mm <sup>2</sup>

**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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