

TECHNICAL DATASHEET

ergo.[®] 1675 (ergo.[®] 1673 + ergo.[®] 1664)

ergo.[®] 1675 is a non-sagging, two-part methacrylate adhesive designed for structural bonding of thermoplastic, metal, and composite assemblies. Combined at a 10:1 (v:v) ratio, it has a working time of 2 to 4 minutes. The fast strength build up provides short cycle times (~4 min up to 10 N/mm²). The cured adhesive offers a balanced profile of properties with high stiffness combined with a strong toughness.

ergo.[®] 1675 is mainly used as an universal grade for industrial applications where composites are involved.

ergo.[®] 1675 fulfills the requirements according to DIN EN 45545-2 chart 5, R1, R7 and R17 with HL1-3.

Advantages

- Good adhesion to a wide range of materials
- Non-dropping paste
- bridges gaps up to 10 mm
- Excellent resistance against dynamic loads
- Resistant against outside conditions and humidity
- 100% reactive compound
- Low odor
- High flashpoint

Product data

Chemical base
Curing system
Mixing ratio

Methacrylate
2-Component-System
10 : 1 (resin : hardener by volume)

Physical properties (uncured):

	Resin	ergo. [®] 1673	~100'000 mPa•s
	Hardener	ergo. [®] 1664	~50'000 mPa•s
Density	Resin	ergo. [®] 1673	1,07 g/cm ³
	Hardener	ergo. [®] 1664	1.15 g/cm ³
Color	Resin	ergo. [®] 1673	off-white
	Hardener	ergo. [®] 1664	blue
Flashpoint			> 60°C
Gap filling			up to 10 mm
Open time			2 – 4 Minutes
Functional strength [~10 N/mm ²]			6 – 8 Minutes
Final strength			12 Hours
Application temperature			+10 °C to +40 °C

Physical properties (cured):

Modulus (DIN EN ISO 178) after 24 h at 23°C	~ 780 N/mm ²
Tensile strength (ISO 527 1A) after 24 h at 23°C	~ 17 N/mm ²
Elongation at break (ISO 527 1A) after 24 h at 23°C	~ 85 %
Lap shear strength (DIN EN 1465) after 24 h at 23°C	
Steel	~ 22 N/mm ²
Aluminum	~ 21 N/mm ²
ABS	> 5 N/mm ² (X)
PC	> 7 N/mm ² (X)
PVC	> 4 N/mm ² (X)
PMMA	> 6 N/mm ² (X)
	(X) = Failure of test specimen
Impact strength IZOD after 24 h at 23°C	~ 8 kJ/m ²
Usage temperature	- 55°C to + 120°C

Chemical resistance

Excellent in

Hydrocarbons
Acidic/alkaline solutions (pH 3 – 10)
Salt solutions

Unstable in

Polar solvents
Strong Acidic/alkaline solutions

Application

ergo.[®] 1675 is available in standard double cartridges.

The usage of a dispenser piston and static mixing nozzles secures correct mixing. As soon as curing of the product starts in the mixing nozzle, it has to be changed. Join the parts within the open time and fix it until functional strength is reached.

Moving the joint parts too early can disturb the curing process and can affect the final strength.

Influence of processing temperature

Between +12°C and +25°C the product cures normal. Below +12°C the curing process needs much more time and a temperature above +25°C will accelerate the curing process. Changing the temperature affects the viscosity of the single components as well.

Handling and storage

Due to the high reactivity of the product and the exothermic curing process, never mix bigger amount of the components. The heat might evaporate parts of the formulation and cause strong smell. Do not waste exceeded material in plastic containers, because of the danger of melting.

Cleaning

The liquid product may be removed with a blotting (absorbent) paper and a solvent like ethanol or acetone.

Cured product must be removed mechanically first and in a second step wiped with acetone. Spilled glue should be mixed with an inorganic absorbent and wasted in accordance to the local regulations.

Precautions

For your own safety, please refer to the information of the MSDS.

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