

TECHNICAL DATA SHEET

BONDAN ST29

Revision: 15.04.2021
Version: 1.002



PRODUCT DESCRIPTION

BONDAN ST29 is an impact- and temperature-resistant two-component epoxy adhesive which was specifically developed for bonding composite materials. Resulting from its improved thixotropic properties the adhesive is well suited for working overhead and for large gaps (up to 5 mm). In the cured state BONDAN ST29 shows a very good adhesion to wood, metals, ceramics and many types of plastics. In addition, the adhesive exhibits high peel and shear strength up to 120 °C (resisting peaks even up to 140 °C).

Mixing ratio by volume: 2:1 (A:B)

TECHNICAL PROPERTIES

Component A (resin)

Chemical composition	epoxy resin
Appearance	white
Viscosity at 25 °C	50000 – 80000 mPa·s
Density	≈ 1.10 g/cm ³

Component B (hardener)

Chemical composition	amine
Appearance	black
Viscosity at 25 °C	50000 – 80000 mPa·s
Density	≈ 1.00 g/cm ³

CURING PROPERTIES

Maximum gap fill	0.1 to 5.0 mm
Pot life at 25 °C (3 g A+B)	150 – 200 min
Fixture time at 25 °C	6 – 9 h
Functional cure time at 25 °C	24 – 36 h
Functional cure time at 60 °C	≈ 1 h
Full cure time at 25 °C	≈ 72 h
Full cure time at 60 °C	≈ 2 h

PROPERTIES IN THE CURED STATE

Colour after mixing (A+B)	black
Peel strength (aluminium)	> 150 N/25mm
Hardness Shore D	≈ 70
Shear strength at 25 °C (ISO 4587)	
Steel	15 - 20 N/mm ²

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FRP/Polyester	$\approx 7 \text{ N/mm}^2$
FRP/Epoxy	$\approx 16 \text{ N/mm}^2$
Carbon fibre	20 - 30 N/mm^2
Temperature resistance	-40 to +120 °C (peaks up to +140 °C)

DIRECTIONS FOR USE

Preparation - Please read the safety data sheet carefully before use. Clean, grease-free and dry surfaces result in maximum strength. Soiled surfaces should be cleaned with BONDAN Cleaner or a suitable solvent prior to the application. We do not recommend the use of cleaning agents containing acetone.

Mixing - The specified mixing ratio (see above) must be strictly respected. The adhesive's properties will be changed by changing the mixing ratio.

To prevent from air inclusions during mixing, we recommend using an appropriate mixing system. In case of the application via 2C cartridges, the mixing ratio is already set correctly. However, the first 3 - 5 cm should not be used.

After mixing both components, the product must be used within the pot life described above.

Do not use an adhesive that has already started to set.

Application - In order to achieve optimal adhesion and good mechanical properties, the inclusion of air in the adhesive joint must be avoided. For small- to medium-sized applications we recommend using 2C cartridges.

Elevated temperatures reduce the pot life of the product. Therefore, the recommended processing temperature of 15 - 40 °C has to be considered.

To ensure good wetting, appropriate pressure should be applied when dispensing the product and during the curing process. The time required depends on the design and surface of the devices as well as environmental conditions. Clamping parts with an excessive pressure is not recommended.

STORAGE

- 12 months at 2 to 7 °C in unopened packaging
- Store in a cool and dry place. Do not store above 25 °C.

PRODUCT LABELLING

See safety data sheet.

PACKAGE UNITS

- For manual application 50 ml 2C cartridge

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