

TECHNICAL DATA SHEET

BONDAN ST04

Revision: 15.04.2021
Version: 1.002



PRODUCT DESCRIPTION

BONDAN ST04 is an impact-resistant two-component methyl methacrylate adhesive. Fast curing at room temperature simplifies the handling when devices cannot be fixed.

In the cured state BONDAN ST04 remains crystal clear and transparent. Resulting bonds have a high shear, peel and impact strength as well as chemical resistance. In addition, the adhesive is highly resistant to thermal shocks and, thus, suitable for bonding materials with strongly differing properties, e. g. metals, plastics, composite materials, ceramics, glass and wood.

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

TECHNICAL PROPERTIES

Component A (in liquid state)

Chemical composition	methyl methacrylate
Appearance	transparent
Viscosity at 25°C	80000 – 120000 mPa·s
Density	≈ 1.1 g/cm ³

Component B (in liquid state)

Chemical composition	methyl methacrylate
Appearance	transparent
Viscosity at 25°C	8000 – 12000 mPa·s
Density	≈ 1.0 g/cm ³

CURING PROPERTIES

Maximum gap fill	3 mm
Pot life at 25 °C (2 g A+B)	≈ 1 min
Fixture time at 25 °C	≈ 8 min
Functional cure time at 25 °C	≈ 25 min
Full cure time at 25 °C	≈ 24 h

PROPERTIES IN THE CURED STATE

Colour after mixing (A+B)	transparent
Peel strength (ISO 4578)	≈ 40 - 50 N/25mm
Hardness Shore D	50 - 60
Shear strength at 25 °C (ISO 4587)	
Steel	≈ 20 N/mm ²
Aluminium	≈ 18 N/mm ²
Carbon fibre	≈ 22 N/mm ²

TECHNICAL DATA SHEET

BONDAN ST04

Revision: 15.04.2021

Version: 1.002



Epoxy FRP	≈ 12 N/mm ²
PVC	≈ 5 N/mm ²
PC	≈ 2 N/mm ²
PMMA	≈ 4 N/mm ²
Glass/Glass	≈ 7 N/mm ²
Glass/Aluminium	≈ 13 N/mm ²
Glass/Steel	≈ 14 N/mm ²
Temperature resistance	-40 to +120 °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 to use 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

PRODUCT LABELLING

See safety data sheet.

PACKAGE UNITS

- For manual application 50 ml 2C cartridge

TECHNICAL DATA SHEET

BONDAN ST04

Revision: 15.04.2021

Version: 1.002



All information provided is based on our extensive tests and practical experience. The data are given for information only. Drei Bond cannot assume responsibility for the results obtained by others which methods are not under our control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Drei Bond disclaims all warranties expressed or implied, including warranties of fitness for a particular purpose, arising from sale or use of BONDAN products.