

Instructions for use of 2-component adhesives and encapsulants out of double chamber cartridges

General

Acrylate-, urethaneacrylate-, methacrylate-, methyl methacrylate, epoxy adhesives and polyurethane resins (PUR) are 2-component products and/or encapsulants used for bonding, casting and coating. At Kisling, these are the product numbers 13xx, 16xx, 18xx, 74xx and 8xxx. The products are used in almost all industries for a wide variety of materials and applications. They are usually filled in double-chamber cartridges and can be easily mixed and dispensed using a dispensing gun and static mixer. This system is used throughout the entire industrial sector. Most products are also available in larger containers, please refer to the relevant instructions for use. For polyurethanes, extended instructions for use with processing instructions are available, in which PU-specific topics are dealt with ("Instructions for use of polyurethane – encapsulants for manual processing"). You will also find further information on the products in the respective technical data sheets.

Curing in general

2-component products begin to react / cure when the components are mixed. When the pot life has been exceeded, the viscosity increases until complete curing. This process, which depends on the individual product, temperature, and quantity, can be very fast and highly exothermic. Fast curing products should be processed in small quantities due to the exothermic reaction. If necessary, provide good heat dissipation. Higher ambient temperatures shorten the curing time and increase the bonding strength. In the case of polyurethane systems, the ambient humidity can have an influence on the quality of the cured product, please refer the corresponding processing instructions.

Preparation of mating surfaces

To achieve optimum bond strength, the mating surfaces must be free of oil, grease and other contaminants. Metal Cleaner 9190 and Plastic Cleaner 9195, which are available as sprays or in large containers, are ideal for this purpose. In some cases, it is not possible to clean the part(s). In all cases it is recommended to test the suitability and strength of the adhesive or encapsulant for the intended application. In some cases, further preparation may be required to achieve the required adhesion.

Application

2-component products consist of a resin and a hardener / curing agent, that are thoroughly mixed into a homogeneous mixture to form the finished product. The product is applied directly from the double chamber cartridge using a dispensing gun. The homogeneous mixture is produced in a static mixer, that fits on top of the cartridge. This prevents mixing errors. Please only use suitable mixers, approved by Kisling.

When using a new double chamber cartridge proceed as follows:

1. Press the safety lever of the dispensing gun and pull the piston rod to the end stop.
2. Insert the double chamber cartridge into the dispensing gun and lock it in place.
3. Push the piston rod forward until resistance is felt.
4. Remove the cartridge cap.
5. Use the dispensing gun carefully and slowly, until product comes out of both nozzles. The chambers are overfilled so there will be no loss during equalisation.
6. Attach and fix the static mixer and lock it either by turning it 90° (50ml cartridge) or by using the union nut (larger cartridge)
7. Before use, squeeze out and discard one mixer content. A good mixing quality should be achieved.
8. Normally, the product is applied to one side / part / surface only, but it can also be applied to both sides. Once the product has been applied, assembly and any fixing should be completed taking the pot life into account.
9. If processing breaks are significantly shorter than the pot life of the product, the same mixing nozzle can be used. If the processing break is longer than approximately 50% of the pot life, it is recommended to discard a mixer volume of the product or use a new mixing tube if the pot life is exceeded.
10. If the process is complete or if there are longer interruptions, the mixer can be left on the double chamber cartridge as a cap.
11. Before the process can be resumed, the old mixer must be replaced with a new one.

Precautions

For your own safety, please refer to the information of the concerned MSDS and for the correct handling the "technical datasheet".

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