

CIPP liner systems

APPLICATION ADVICE

Substrate Preparation: The substrate must be free and clean from loose matter, dust, oil, grease, cement slurries and other materials that would prevent a good bond. The adhesive tensile strength of the substrate surface must conform to the relevant technical regulations. The substrate can be dry or damp (according to definition of DafStb-guideline „Protection and Repair of Concrete Parts“ issue October 2001, part 2 item 2.3.5).

Vacuum: To support impregnation apply a vacuum to the polyester needle felt hose. See further details in the executive statements.

Mixing: Base (component A) and hardener (component B) must be carefully mixed to a uniform consistency by using a slow-running mechanical stirrer (approx. 300 - 400 rpm.) or suitable static mixers. In case of pigmented resins, the base and hardener should be stirred separately beforehand for about 1 minute. Make sure that the material in the corners and sides of the mixing container is thoroughly mixed as well. The mixing is only complete when a homogenous mixture has been achieved. After mixing the material should be filled into a clean container and briefly mixing again (“re-potting”). Splitting containers and mixing partial quantities must be avoided. Mixing by hand is not allowed. Please find mixing and processing time in the respective technical data sheet. Completely emptying of packs is absolutely necessary for eco-logical reasons and compliance with mixing ratio.

Application: Application of reaction resins for CIPP liner is done by impregnation or fulling. Polyester needle felt must be dry and free of all substances that can cause problems with wetting (by resin) or curing. Otherwise a deep wetting is not possible. Insufficient wetting may cause loss of strength and subtotal curing of reaction resin. Reaction resin must be evenly distributed into the polyester needle felt. The reaction resin is pigmented and can be used as control for homogenous and complete impregnation of the polyester needle felt. Exact amounts and procedure can be gathered from the technical data sheets, the General Building Inspection Test Report Z-42.3-396 (Konudur Homeliner) of the German Institute for Construction Technology and the executive statements.

Curing / Release: CIPP liners are cold and warm curing, depending on product. Curing and heating time depends on temperature and can be seen in the technical data sheets and the heating tables. For compliance and control of heating time and heating temperature sensors are placed at start-, intermediate- and end-duct between the scrap pipe wall and the bottom of the CIPP liner. Measurements must be recorded. Curing and heating time begins with the achievement of the necessary temperature (set temperature) at the bottom of the hot water branch of the opposed duct.

A sample of drenched CIPP liner should be stored (under almost same conditions, temperatures as in pipe) near the installation point (e.g. bottom of manhole) to assess the demoulding of cold-curing. Exact curing times depend on nature of object (temperature etc.) and can be elongated in contact with ground-water.

Structural Analysis: Observe DWA-A 143-2 „Statische Berechnung zur Sanierung von Abwasserkanälen und -leitungen mit Lining- und Montageverfahren“ (latest version). See necessary material characteristics in general building approval Z-42.3-396 (Konudur Homeliner).

Sampling: We recommend following procedure for sampling of cured CIPP liner: Samples can be taken from the rehabilitated pipe or from a solid, not deformed pipe in a blind manhole. Never take sample from back-up hose or other materials that deform or expand under pressure and / or warmth because expansion can tamper with product characteristics. We recommend testing samples after min. 7 days (better 28 days) because then the full chemical and mechanical load is available.

General Information: The amounts used, processing time, walk-on time and time to reach full chemical and mechanical load capacity all depend on temperature and the nature of the project. Chemical action and the effect of light may result in changes of colour. Generally these have no adverse effect on the usability of the product. Areas subject to chemical action and mechanical loads are subject to wear in use. The processing and curing times are shortened by high temperatures and increased by low temperatures. A 10 K temperature change doubles or halves the stated times. That is not valid for warm hardening.

Safety Advice: Observe the hazard notices and safety advice given on the labels and safety data sheets. The relevant safety data sheets can be downloaded from www.mc-bauchemie.de.

Note: The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2400022136]