

## Short liner systems

### APPLICATION ADVICE

**Substrate preparation:** Carefully select cleaning methods to avoid causing further damage to the sewer or pipe. High-pressure water and hydromechanical pipe cleaning techniques (2000 5000 psi) are effective for removing build-ups. If there are deposits or compounds narrowing the cross-section, robotic methods should be used for removal. The success of repair work relies on establishing a strong, lasting bond between the short liner and the existing pipe. Short liners infused with reaction resin must tightly adhere to the old pipe. Before installing the short liner, clean the old pipe thoroughly with a rotary nozzle to remove grease and residue from the surface. After cleaning and pre-treatment, conduct a TV inspection to assess and document the results. If any obstacles were cleared during preparation, perform another TV inspection to confirm the effectiveness of the works. Glazed earthenware pipes require removal of glazing on both sides over 20 cm using a sewer robot, ensuring full coverage with a short liner.

**Mixing:** Base (component A) and hardener (component B) must be carefully mixed to a uniform consistency by using a slow-running mechanical stirrer (anchor stirrer) (approx. 300 - 400 r/min.) or suitable static mixers. In case of pigmented resins, base and hardener should be stirred separately beforehand for about 1 minute. Make sure that material in corners and sides of the mixing container is thoroughly mixed as well. After mixing the material should be filled into a clean container and briefly mixed again ("re-potting"). 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 ecological reasons and compliance with mixing ratio.

**Application:** Application of reaction resins for rehabilitation of short liners is done by lamination method. Required amount of reaction resin is applied onto ECR-glass fibre complex, evenly distributed by using a plastic spatula and merged professionally. ECR-glass fibre complex must be dry and free of all substances that can cause problems with wetting (by resin) or curing. Otherwise a deep wetting of the complex is not possible. Insufficient wetting may cause loss of strength and subtotal curing of reaction resin. Exact amounts and procedure can be gathered from the technical data sheets, the General Building Inspection Test Report Z-42.3-391 (Konudur LM-Liner) of the German Institute for Construction Technology and the executive statements.

**Curing / Release:** Short liners are cold-curing. Curing time depends on temperature and can be seen in the technical data sheets. Through addition of the catalyst Konudur 250 OM-PL Beschleuniger the curing process can be shortened. For more information please request special advice. A sample of the drenched short liner should be stored / cured (under almost same conditions, temperatures as in pipe) near the installation point (e.g. bottom of pipe) to assess the demoulding of cold-curing.

**General Information:** The amounts used, processing time and time to reach full chemical and mechanical load capacity 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 stated processing times are shortened by high temperatures and increased by low temperatures. A 10 K temperature change doubles or halves the stated times.

**Safety Advice:** Protective clothing, protective gloves and safety glasses / face protection must be worn when using this product. 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](http://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. [2300018913]