

MC-Ballastbond 70

Special resin for bonding of ballast, split and loose rock

Product Properties

- Low-viscosity polyurethane based duromer resin
- Short reaction time
- Durable bonding
- Fulfils requirements of the DIBt-leaflet "Evaluation and effects of construction products on soil and ground water" (11/2000)
- Flame resistant (material class B2 according to DIN 4102)
- REACH-Assessed exposure scenarios: periodical water-contact, application

Areas of Application

- Reinforcement of ballast by gluing of aggregates without impairing its drainage capacity
- Improving the positional stability of highly loaded gravel along railway tracks, e.g. at lane crossings, in curves, at shunts
- Protection of gravel shoulders during conversion work and track renewal
- Bonding and sealing of gravel and split surfaces to increase the load capacity, to colour or against plant growth

Application

Product description

MC-Ballastbond 70 is a two-component reaction resin, which reacts to a solid, tough-elastic resin body. In contact with water, MC-Ballastbond 70 foams limited. Minor foaming does not affect the ballast adhesion. The reactivity can be controlled by adding catalyst.

Preparation

Before application, the construction has to be inspected according to technical standards and regulations. The ballast to be bonded should be dry, clean and free from any contaminants.

Mixing

MC-Ballastbond 70 consists of two components, component A (base) and component B (hardener). Both are to be mixed homogeneously with each other before application. When using a pigmented component A, it must be stirred before processing to achieve a uniform colour.

The components are mixed in the head of the two-component injection-pump by using suitable static mixer. The required mixing quality is achieved by using helix-mixers over a mixing length of 30 cm.

Application

The installation should be carried out with a two-component injection-pump with sufficient capacity.

The resin mixture is sprayed evenly onto the aggregate surface with a lance. The spray jet should be a closed fan beam. The distance to the ballast surface shouldn't be more than 20 cm.

For processing, e.g. the MC-I 700 can be used. The spray nozzle should be optimized under site conditions (resin temperature, spray width). The order quantity per m² depends on the given penetration depth.

Application of the resins must be stopped if the temperature of the substrate < 5 °C and > 40 °C, in rain and wet gravel surface. The access of moisture to the resin components in opened containers is to be effectively prevented (e.g. by drying agents).

Acceleration of reactivity

The reaction time of the resin can be modified by the accelerator MC-KAT 27 (amount added up to 1% based on component A).

Machine Cleaning

In case of any longer interruption of work, exceeding the pot life of the resin, the injection pump must be flushed thoroughly with MC-Verdünnung PU (thinner). Partially or completely cured material can only be removed mechanically.



Technical Data for MC-Ballastbond 70

Characteristic	Unit	Value*	Comments
Mixing ratio	p.b.v.	1 : 1	component A : component B
Density	kg/dm ³	1.13	DIN 53 479
Viscosity	mPa·s	200 ± 50	EN ISO 3219
Compressive strength	N/mm ²	40	EN 196 T1
Slant shear strength	N/mm ²	13.3	BS 6319, part 4
Flexure tensile strength	N/mm ²	3.5	EN 196 T1
Shore-A-hardness		approx. 90	EN ISO 868
Application time	minutes	10	ASTM D7/487
Application conditions	°C	+ 5 - + 45	temperature of the rock surface
		+ 5 - + 40	temperature of material
	%	≤ 85	relative humidity
	K	3	above dew point

* All technical values relate to 21 ± 2 °C and 50 % relative humidity

Product characteristics for MC-Ballastbond 70

Colour	Component A: yellowish / black Component B: brownish Mixture: brownish / anthracite
Delivery	MC-Ballastbond 70: Container 1000 l, drum 200 l, canisters of 20 l for each component; MC-KAT 27 in a box of five 400 ml bottles MC-Additiv ST in a box of five 400 ml bottles
Storage	Can be stored in original sealed packages at temperatures between +5 °C and + 40 °C in dry conditions for at least 18 months. The same requirements are valid for transport.
Cleaning agent	MC-Verdünnung PU (MC-Thinner PU) Water or water-based cleaners must not be used under any circumstances.
Disposal	Packs must be emptied completely.

Safety Advice

Please take notice of the safety information and advice given on the packaging labels and safety information sheets. GISCODE: PU40

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are only binding if given in written form. The accepted engineering rules must be observed at all times.

Edition 08/19. Some technical changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.