

Mix design RSS Flüssigboden® consistency: kf (plastic) V 2.0

Customer: John Doe Ltd
 Wurzner Str. 139
 04315 Leipzig

construction project: Husum, Hinterm Deich

base material: medium silt (UM; MSi / ISO 14688-1:2002) pebbly (see figure 1)

Sample collection: Jan Jansen, John Doe Ltd

Mix design ID: MM-HDFW-1 kf

Root ID: 17-000 A-B, MR; 17-000-2 A-B, MR; 17-000-3 A, MR

Nominal values	
Mix design for district heating	
Unconfined compressive strength*⁴ after 28 d	0.08–0.3 N/mm ²
Surface friction T max*⁵ after 28 d	6–30 kN/m ²

*⁵ Determined based on small-scale tests to adhere to the shear stress t_{PUR}, adm of 0.04 MPa according to AGFW, FW 401, part 3, p. 11

Mix design according to RAL GZ 507*¹ - C	Mix design number: 007-17 kf
Treated base material/dry (condition 24 h before use with approx. 1% Proviacal RSS - FB RD)	1220 kg/m ³
RSS Breitband (broadband) FBC number: 45.0.04315.1	45 kg/m ³
BCE: CEM I 42,5 R	39 kg/m ³
Total water (incl. inherent moisture)	510 kg/m ³
Diameter of flow	58 ± 2cm
Max. tolerance inherent moisture*²	2%
This mix design is valid until*³	01/04/2017

Leipzig, Germany 01/03/2017

ppa. Dipl.-Geologe J. Detjens (graduate geologist)



Figure 1: Base material medium silt (UM; MSi / ISO 14688-1:2002), pebbly

The mix design is valid only for the construction project, the base material and the additives named above. Only the Forschungsinstitut für Flüssigboden GmbH (FiFB) is entitled to make changes to the mix design. This mix design is property of FiFB. Only the customer of this mix design as its owner and user is entitled to produce liquid soil according to RAL-GZ 507 for the specified project and under its placement conditions. This mix design is not transferable to third parties, including other sites/locations. We would like to draw your attention to the fact that certain technologically relevant properties of the RSS Flüssigboden® are very important for the specific technology of the construction site, and therefore for the necessary or no longer necessary efforts, as well as for the choice of the technical aids such as the type of lining/sheeting or transport requirements. Since these technologically relevant properties can be influenced within certain limits, a detailed adjustment of the construction site technology and the RSS Flüssigboden® properties is absolutely necessary before the start of construction works. The coordination between the construction company and the FiFB is necessary for this purpose. The mix design determined for the RSS Flüssigboden® (consistency k_p - plastic, and k_f - fluid) is based on laboratory tests made in advance, and a fine adjustment at the start of the construction works on site. Any necessary changes in mix design may only be made by the mix design developer. Unauthorized mix design changes as well as the use of unauthorized additives inevitably lead to the exclusion of liability of the FiFB and the assumption of any liability risks by the producer. Possible expenses, costs, claims for damages, etc. are then transferred to the manufacturer. These can arise when unauthorized changes of the single quantities of the mix design components or a change in the process specifications are made. For example, unwanted strength developments and unwanted end properties of the liquid soil, such as shrinkage, cracking, etc. can be caused. The producer as a company as well as the person as causer are responsible for compliance with these requirements.

*1 The RSS Flüssigboden produced according to this mix design complies with the RAL criteria, provided that the source material is environmentally safe (this does not apply to immobilisation mix designs with special labelling). All directives for production, quality assurance, placement and transport of Flüssigboden in accordance with RAL-GZ 507 must be complied with in accordance with the applicable standard. The suitability of the Flüssigboden for the particular construction project and for the respective surrounding material and the placement situation must be checked. In the case of a total of PROVIACAL RSS + BCE- ≥ 3 wt%, environmental safety is to be proven as a RAL criterion. The electrical conductivity and the pH of RSS Flüssigboden can temporarily lie above the allocation values Z0 according to LAGA (German Working Group Waste Management of the federal countries).

*2 Tolerance range for reaching the specified diameter of flow.

*3 According to the mix design adjustment, the validity is set to 1 year. Once the validity has expired, it can be extended by the FiFB in the case of successful quality controls and application of the same source material / additives. If this mix design is replaced, it loses its validity.

*4 q_u refers to sample dimensions: Height: 120mm \varnothing : 96mm