

Technical Data Sheet

Desalination poultice

General properties



This desalination poultice consists of a well-balanced mixture of bentonite, sand, cellulose and precisely defined expanded glass granulates of different grain sizes. After mixing with water and application on the surface to be desalinated, a highly porous mass with high capillarity is obtained. This allows an effective desalination of salt polluted areas, in accordance with the requirements defined in the WTA leaflet 3-13-01/D, (04.02.2003). During drying of the poultice, salt transport from the stone into the poultice is achieved by capillary suction. This requires that the pore sizes of the compress are smaller than those of the salt polluted substrate (see Figure 1). Typical properties of the final compress are given in Table 1.

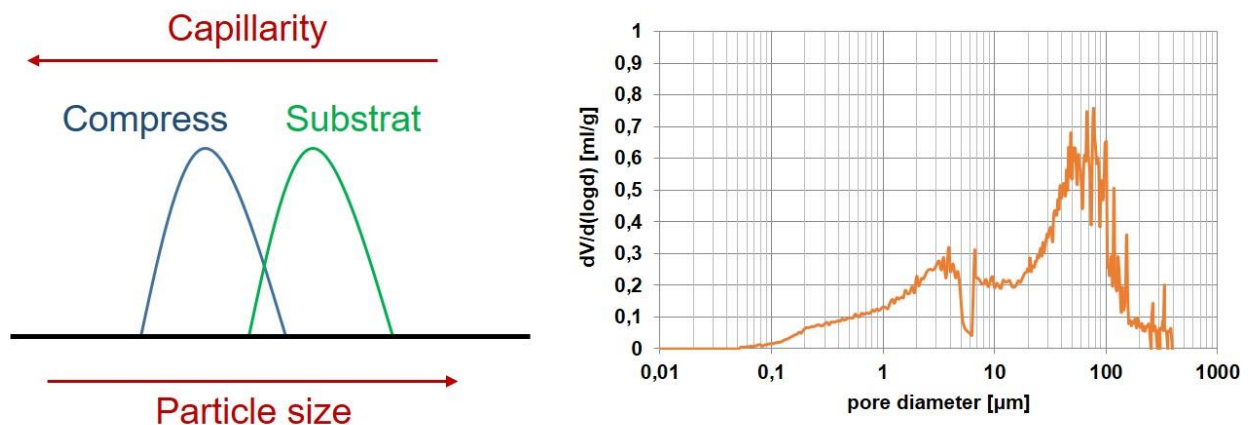


Figure 1: (Left) Schematic representation of the required pore size distribution of compress and salt polluted substrate. (Right) Pore size distribution of the desalination poultice.

Table 1: Characteristics of the compress.

Appearance	beige
Porosity	60%
Porous distribution > 50%	10-100 µm
Bulk density	830,7 kg/m ³
Water vapour diffusion value µ	4,7
Shrinkage behaviour	1-2%

Application

The poultice is prepared by mixing of the solids with deionized water in a clean container, whereby the dry material has to be added slowly to the water. The suspension is homogeneously mixed with conventional mixing tools for 5 minutes and can then be applied by hand, trowel or a plastering machine to the surface to be de-salted. The surface must be clean and

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dust-free before applying the compress. In addition, the affected area should be lightly moistened with deionized water. The compress can be removed after approximately 3-4 weeks. A second application of a new poultice may be necessary, depending on the salt pollution of the substrate and the overall conditions. This, however, has to be decided based on a chemical analysis of the substrate and the salt content of the poultice.

Attention! Do not wet the compress again when it has dried! Cracks occurring during the drying process are not critical and do not influence the de-salting process.

Table 2: Overall conditions for the application of the poultice material.

Mechanism of action	Drying compress
Water requirement	0,7 kg deionized water on 1 kg compress material
Consumption	approx. 13 kg/m ² per layer thickness in cm (1-2 cm layer thickness recommended)
Processing	Temperature +5 °C to +30 °C In general, extreme situations should be avoided, i.e. conditions resulting in too fast (hardly any salt removal) or too slow (danger of mildew formation) drying. Clean tools with fresh water while the material is fresh.

Application example



Figure 2: Compress material on salt contaminated masonry.

Table 3: Analytical investigations of the aqueous extract of the compress material.

	pH-value	Conductivity [mS/cm]	Cl ⁻ [wt.%]	NO ₃ ⁻ [wt.%]	SO ₄ ²⁻ [wt.%]
Surface before treatment	6,5	6,88	0,05	1,27	1,61
Surface after treatment	6,9	1,34	0	0,14	0,01

Form of delivery / Storage

The desalination compress is supplied in 15 kg bags as dry, ready to use mixture. When unopened and dry, the material can be stored indefinitely. It is recommended to consume an opened bag completely.

Safety

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When processing desalination compresses, care must be taken to ensure good ventilation. Ideally, respiratory protection should also be worn, as dust may develop during the mixing process. Further information can be found in the latest MSDS.

Please read our safety data sheet before use!

The above information has been compiled according to the latest state of development and application technology. Since application and processing are beyond our influence, no liability of the manufacturer can be derived from the contents of these application instructions.

