Product Data Sheet Edition 27/04/2009 Identification no. 3.1.010 Version no. 08 Intraplast<sup>®</sup> Z HV

## Intraplast<sup>®</sup> Z HV

Shrinkage compensating and plasticizing admixture

Description	Intraplast <sup>®</sup> Z HV is a ready for use admixture in powder form. Intraplast <sup>®</sup> Z HV causes the cement mixture to expand before setting. By formation of micro bubbles into the wet mix, volume is expanded and fluidity is increased without segregation. Intraplast <sup>®</sup> Z HV reduces the separation of water (bleeding) from the mixture. It prevents premature setting and allows a reducing in the amount of gauging water. Depending on its dosage and the mix design features, it allows the production from injection grout to thixotropic grout.
Uses	<ul> <li>Intraplast Z<sup>®</sup> HV is a special product for the production of grouting mortar, backfilling mortar, and rock and soil anchoring. The use of Intraplast Z<sup>®</sup> HV with the grouting mixture has the following advantages:</li> <li>High final expansion up to 10% if the mixture is correctly designed</li> <li>Non-shrink grout production even if sand is added into the grout mixture</li> <li>Improved fluidity and prolonged workability</li> <li>Good compressive strength can be achieved even when high expansion is required</li> <li>Protective action against corrosion of the prestressing wires</li> <li>Increased cohesion of the grout (thixotropic properties)</li> <li>Volume expansion in the wet state</li> <li>Protective action against corrosion of the rock bolts</li> <li>Durable and dense filling of all cavities</li> <li>Non-toxic and non-flammable</li> <li>Grouting for sonic piles</li> </ul>
Product Data	White
Form	Powder
Packaging	15 kg bag (30 x 0.5 kg/bag), or 18 kg bag (30 x 0.6 kg/bag)
Storage	Stored in dry condition
Shelf life	Min. 24 months, if stored in dry place, in sealed and undamaged bags
Technical Data	
Apparent density	~ 1.05 kg/l
Chloride content	Nil
Application	
Dosage	1.0 - 1.5% by weight of cement for cement sand mix
	0.4 - 1.0% by weight of cement for slurry
Typical dosage	1.0 - 1.2% by weight of cement for cement sand mix
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0.4 - 0.8% by weight of cement for slurry

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Mixing	Mixing sequences are as follows: water, Intraplast <sup>®</sup> Z HV and then cement slowly added while mixing. In case of the use of sand, it must be added after the cement. Allow sufficient mixing time to get a mixture showing homogeneous consistency.
Application	Depending on the grouting work, place the grouting material as soon as possible after mixing to gain full benefit of the expansion process. The normal means of placing or pumping of grouting material shall be used to ensure a continuous flow.
Cleaning	Clean all tools and equipment immediately after use with water.
Remarks	To obtain the optimum workability and expansion, the correct W/C ratio, sand/cement ratio and dosage of Intraplast <sup>®</sup> Z HV shall be determined through trial mixes.
	<ul> <li>The dosage of Intraplast<sup>®</sup> Z HV is dictated by the final expansion ratio and mixture consistency wished.</li> </ul>
	Typical mix design:
	<ul> <li>Cementitious mix for pre-grouted anchor:</li> </ul>
	Without sand: W/C between 0.30 to 0.38, Intraplast <sup>®</sup> Z HV dosage 0.4-1.0% (the addition of Sika superplasticizer is recommended for improved flow and water reduction).
	With sand: sand /cement 1/1; W/C 0.40 to 0.45; Intraplast <sup>®</sup> Z HV 1.0 - 1.2%
	✓ Cementitious mix for back filling: Without sand: W/C between 0.40 to 0.45; Intraplast <sup>®</sup> Z HV dosage 1.0-1.5%.
	■ High alumina cement is not suitable for use with Intraplast <sup>®</sup> Z HV.
	It is known that the properties of the grout are significantly affected by the cement properties, the addition of water and sand and as well by the temperature.
Health and Safety Informati	on
Ecology	Do not dispose into water
Toxicity	Non-toxic under the relevant Swiss Health and Safety codes.
Transport	Non hazardous
Important notes	Contact with eyes, skin or mucous membrane may cause irritation. Wear gloves and goggles.

Product contaminates water. Do not dispose of into water or soil but according to local regulations.

Disclaimer	The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.
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