

Intraplast® Z

Expanding grout admixture

Product Description

Intraplast® Z is a ready to use injection aid in powder form. It is non-toxic, non-flammable and does not contain chlorides or other ingredients of a corrosive nature.

Intraplast® Z causes the cement mixture to expand before setting. The swelling is caused by the extremely regular formation of densely distributed tiny gas bubbles consisting of inert hydrogen. These very tiny pores give the set material a high degree of frost resistance.

Uses

Intraplast® Z is a patented special product for the grouting of prestressing cables, loose soil formation and cavities in rocks. The use of Intraplast® Z in the grouting mixture has the following effects:

- Prolonged workability
- Good strength and adherence properties
- Protective action against corrosion of the prestressing wires
- Durable and dense filling of all cavities

Characteristics Advantages

- / ■ Causes cement mixtures to expand before setting
- Reduces the separation of water (bleeding) from the mixture
- Prevents premature setting
- Makes a reduction of the amount of gauging water possible
- Non-toxic and non-flammable
- No chloride or other ingredients of corrosive nature

Product Data

Form

Appearance / Colour Ready to use powder, grey

Packaging 20 x 1 kg packs per bag

Storage

Storage Conditions / Shelf Life 12 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions. Protect from direct sunlight.



Mechanical / Physical Properties

Typical Results

		Control	Sample 1	Sample 2
<i>Mix Design</i>	Cement	1	1	1
	Water	0.5	0.45	0.4
	Intraplast® Z per 50 kg OPC	-	500 g	1000 g
<i>Flow Test – JA Cone</i>	3 mins after mixing (3 mins ± 0.3 sec)	3.09 seconds	3.18 seconds	3.31 seconds
<i>Density (kg/m³)</i>		1,840	1,850	1,885
<i>Air Content (%)</i>		8.2	5.8	6.4
<i>Expansion (%)</i>	30 minutes	0.663	1.150	3.638
	1 hour	0.550	1.088	3.850
	3 hours	0.325	0.963	3.775
	5 hours	0.050	0.700	3.525
	7 hours	-0.110	0.525	3.238
	24 hours	-0.280	0.350	1.850
<i>Compressive Strength (N/mm²)</i>	1 day	13.4	11.8	13.7
	7 days	26.0	29.2	31.6
	28 days	41.7	44.2	49.5

System Information

Application Details

Recommended Dosage 1 – 2% by weight of cement (0.5 – 1.0 kg per 50 kg cement)

Application Instructions

Mixing

When grout containing sand is to be used the mixing sequence should be Sand → Cement → Intraplast® Z → Water.

For prestressed concrete work where batching of the mixture is done in the usual mechanical way, a mixing time of 4 minutes together with a w / c ratio of 0.40 – 0.45 are found to be satisfactory. Generally the most suitable mixing sequence is Water → Cement → Intraplast® Z.

Application Method / Tools

Place the grouting material within 15 minutes of mixing to gain the full benefit of the expansion process. The normal means of placing and pumping of grouting material should be used to ensure a continuous flow.

It is not recommended to add sand for prestressed concrete work.

Cleaning of Tools

Clean all tools and application equipment with water immediately after use. Hardened and/or cured material can only be removed mechanically.

Notes on Application / Limitations

- Intraplast®-Z is essentially a product for use by specialists working in the field of prestressing and grouting techniques
- It is known that the properties of the injection aid can be significantly influenced by the mixing procedure, cement properties, addition of water and sand and temperatures
- For important work it is necessary to determine the most suitable procedure by means of preliminary site tests
- Cement containing fly ash may show lower expansion

Curing Details

Applied Product Ready For Use All exposed areas which have been grouted should be cured using Sika's range of curing compounds or wet hessian.

Value Base All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Health and Safety Information For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (available upon request) containing physical, ecological, toxicological and other safety-related data.

Legal Note 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.



Sika Singapore Pte Ltd
200 Pandan Loop, 06-02 Pantech 21
Singapore 128388
SINGAPORE

Phone: +65 6777 2811
Fax: +65 6779 6200
e-mail: info@sg.sika.com
www.sika.com.sg



Sika Kimia Sdn Bhd
Lot 689 Nilai Industrial Estate
71800 Nilai, Negeri Sembilan DK
MALAYSIA

Phone: +606-7991762
Fax: +606-7991980
e-mail: info@my.sika.com
www.sika.com.my

