

## PRODUCT DATA SHEET

# SikaPlast<sup>®</sup>-411 X

High efficient superplasticizer

### DESCRIPTION

SikaPlast<sup>®</sup>-411 X is the latest development of superplasticizer for concrete. It meets the requirements for high range water reducing superplasticizers.

### USES

SikaPlast<sup>®</sup>-411 X is a unique multipurpose superplasticizer that is particularly suitable for the production of ready mixed concrete. Additionally it provides high water reduction and improved fresh concrete characteristics.

With its outstanding cost / performance SikaPlast<sup>®</sup>-411 X is used for the following:

- A wide range of applications where excellent workability is requested
- Concrete with high water reduction
- High efficient concrete applications
- Variable use in different concrete systems with different raw materials

### PRODUCT INFORMATION

<b>Chemical base</b>	Modified Polycarboxylate
<b>Packaging</b>	255 kg HDPE carboy or Tanker supply
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged unopened, original sealed packaging.
<b>Storage conditions</b>	Store in dry conditions at temperatures between +10°C and +40°C. Protect from direct sunlight and frost.
<b>Appearance / Colour</b>	Light Brown Liquid
<b>Density</b>	~1.11 kg/l at 25°C
<b>pH-Value</b>	≥ 6

### CHARACTERISTICS / ADVANTAGES

SikaPlast<sup>®</sup>-411 X is a powerful superplasticiser based on advanced technology which gives the following advantages:

- Strong water reduction, resulting in high density, high strength and reduced permeability
- Less sensitive against variations in aggregates and / or different cement types
- High efficiency even at low dosage rates
- Extended workability in conjunction with subsequent strength development
- Superior plasticising effect, resulting in improved flow, placing and compaction characteristics

### APPROVALS / STANDARDS

IS 9103, ASTM C494

## APPLICATION INFORMATION

<b>Recommended Dosage</b>	0.2 % to 2 % b. w. o. cementitious. Optimum dosage has to be finalized through site trials. Stir well before use.
<b>Dispensing</b>	SikaPlast®-411 X can be added into the mixing water or directly into the concrete mixer after 50% – 70% of the mixing water has been added. The addition of SikaPlast®-411 X to dry aggregate or cement is not recommended. To achieve optimum performance a minimum wet mixing time, which is depending on the mixing conditions and the mixer performance, of 60 seconds is recommended.
<b>Compatibility</b>	SikaPlast®-411 X may be combined with many other Sika® Products. Compatible with all types of cements and cementitious materials. Important: Always conduct trials before combining products in specific mixes and contact our Technical Service Department for information about specific combinations.

## BASIS OF PRODUCT DATA

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.

## IMPORTANT CONSIDERATIONS

When using SikaPlast®-411 X a suitable mix design has to be taken into account and local material sources shall be trialled.

SikaPlast®-411 X shall not be added to dry cement. Excessive water addition or overdosing may cause bleeding or segregation.

Frost:

If frozen and / or if precipitation has occurred, SikaPlast®-411 X may be used after thawing slowly at room temperature followed by intensive remixing.

## ECOLOGY, HEALTH AND SAFETY

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 containing physical, ecological, toxicological and other safety-related data.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## LEGAL NOTES

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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### Product Data Sheet

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