

PRODUCT DATA SHEET

SikaPlast®-221 PR

High range water reducer / superplasticiser

DESCRIPTION

SikaPlast®-221 PR is a concrete superplasticizer based on modified polycarboxylate ether. The Product is used in ready-mix and site-batched concrete for high water reduction combined with high setting control.

USES

SikaPlast®-221 PR is used for:

- Economic, eco-friendly and ergonomic production of concrete mixes with highly workable, non-segregating concrete utilizing low water cement ratios
- Ready-mixed concrete
- Pumped concrete
- Long-distance transporting
- High workability without segregation or bleeding
- High durability

PRODUCT INFORMATION

Chemical base	Aqueous solution of modified polycarboxylates
Packaging	245/255kg drum/bulk supply
Appearance / Colour	Light brown liquid
Shelf life	12 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +40 °C. Protect from direct sunlight and frost. Always refer to the packaging. Frost: If frozen or if precipitation has occurred, the Product may be used after thawing slowly at room temperature and intensive mixing.
Density	~1.08 kg/l at 25°C
pH-value	≥ 6

CHARACTERISTICS / ADVANTAGES

- High water reduction
- Good dispersion even in mixes with high fines
- High workability for longer periods
- Lowers pumping pressure
- Resistance to segregation even at high workability
- Extended setting with longer workability
- Higher final strengths
- Improves surface appearance and durability of concrete

APPROVALS / STANDARDS

Conforms to IS 9103 / ASTM C494

APPLICATION INFORMATION

Recommended Dosage

- 0.2 to 2% by weight of cementitious.
- The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilized in special cases according to specific job conditions.
- Note: Preliminary laboratory trials are always recommended to determine the optimum consumption and injection parameters.
- Contact Sika Technical Services for additional information.
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SYSTEM INFORMATION

Compatibility

The Product is compatible with most of the Sika products. Use Sika® Stabilizer as viscosity modifying agent in self compacting concrete

The Product is not compatible with melamine or naphthalene based admixtures.

The Product is compatible with all standard cement types. For use with other cements contact your local Sika technical service for information.

The Product can be combined and is recommended for use with other Sika products, such as:

- SikaRapid® hardening accelerators
- Sika® Stabilizer workability improver, for example Sika® Stabilizer VMA series to modify viscosity
- SikaControl® durability and quality enhancer, for example SikaControl® AER series to improve frost and thaw resistance
- Sika® Separol® mould release agents
- Sika® Antisol® curing compounds

The Product is not compatible with admixtures from the Sikament® range.

Always conduct trials before combining different products.

Contact Sika Technical Services for additional information.

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®-221 PR a suitable mix design has to be taken into account and local material sources shall be trialled.

SikaPlast®-221 PR shall not be added to dry cement. Excessive water addition, overdosing, changes in aggregates properties, cement properties, cementitious materials properties may cause bleeding, segregation issue, workability or setting issues.

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.

APPLICATION INSTRUCTIONS

MIXING

The Product is a ready-to-use liquid that is added to

the concrete during the mixing process. Optimal water reduction is obtained if the Product is dispensed into the concrete mix after the addition of 50–90 % of mixing water. Avoid adding the Product to dry materials. The Product should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing the Product they must be dispensed separately.

After adding the Product allow enough mixing time to secure a homogenous concrete. If necessary, continue mixing and add additional Product to obtain the required workability.

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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