

PRODUCT DATA SHEET

Sika® Sigunit®-2206 L Max

Liquid shotcrete accelerating admixture

DESCRIPTION

Sika® Sigunit®-2206 L Max is a liquid shotcrete accelerator for applications using the dry or wet spray process.

USES

Sika® Sigunit®-2206 L Max is a liquid accelerator for the dry or wet spray shotcrete process in applications such as:

- Tunnel shotcrete linings
- Heading stabilization in tunnelling
- Rock and slope stabilization
- Formation of permanent gunite or shotcrete shells on shotcrete repairs

FEATURES

The accelerator's effect is dependent on the cement content and type, substrate temperature and type, shotcrete temperature, layer thickness and spray process / equipment. The water/cement ratio of the basic concrete mix is another important parameter which influences the acceleration effect of Sika® Sigunit®-2206 L Max.

The following properties distinguish Sika® Sigunit®-2206 L Max:

- Exceptional early strength development
- Improves adhesion to substrate and reduces rebound even up to <10 % (depending on the conditions and the ingredients of the concrete mix)
- Allows for high output, even >20 m³/h (depending on the conditions and the ingredients of the concrete mix)
- High layer thickness can be applied in one operation, even on overhead applications
- Improves the adhesion of shotcrete to rock and concrete, making overhead spraying easier
- Can be used with all cement types
- Due to its effectiveness demands very low dosages in comparison with other products for similar results
- Chloride free, does not attack or corrode iron or steel reinforcement

CERTIFICATES AND TEST REPORTS

CE-marking and Declaration of Performance as Sprayed concrete set accelerating admixture (Table 2) according to EN 934-5:2007, based on certificate of factory production control issued by notified factory production control certification body and type testing.

PRODUCT INFORMATION

Composition	Aqueous solution of sodium aluminate
Packaging	IBC, bulk supply upon request
Shelf life	6 months from date of production
Storage conditions	<p>Sika® Sigunit®-2206 L Max must be stored in undamaged, unopened, original sealed containers.</p> <p>Sika® Sigunit®-2206 L Max reacts in contact with atmospheric humidity (moisture) or rain. The product must therefore always be stored in sealed containers.</p> <p>Sika® Sigunit®-2206 L Max should only be decanted into clean containers. Avoid air entrapment during filling process. Filling through floor inlets or</p>

immersed pipes is best. Containers must always be properly sealed.
Do not store in aluminum tanks.
Protect from extreme cold.
Note: Once containers are opened, use the material as quickly as possible.

Colour	Yellowish
Density	~1.55 kg/L
pH-Value	11 – 13 [1% b.w. in aqueous solution]
Total chloride ion content	Chloride free

TECHNICAL INFORMATION

Concrete mix design

Aggregate granulometry:

Normal max. particle size 4 mm to 16 mm.

Concrete consistency (dependent on spray equipment):

Concrete slump (EN 206): S4; Water/Cement < 0.50

A suitable superplasticizing agent is required (e.g. Sika® ViscoCrete® series).

Fresh concrete temperature: > +15°C.

For better system performance, the use of mixtures with low W/C ratios (<0.50) in combination with compatible Sika® ViscoCrete® superplasticizers is recommended. In case of demands for higher pumpability, the use of Sika® Visco I-100 will give exceptional results.

Reduction in cement quantity can be achieved, with use of suitable Sika admixtures and appropriate mix design.

SYSTEM INFORMATION

Compatibility

The following Sika products are generally used to improve the performance or application properties of the basic concrete mix:

Sika® ViscoCrete® / Sika® ViscoFlow® series

SikaTard®-930

Sika® Visco I-100

SikaFume® HR-E / Sikacrete® HD

Sika-Air® Fine

In all cases trials are recommended before combining products

APPLICATION INFORMATION

Recommended dosage

2-6 % b.w. of binder

The correct dosage must be determined by preliminary testing

Material temperature

Sika® Sigunit®-2206 L Max effectiveness is reduced when product temperature during use is below 10 °C.

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

- Ambient temperature must be > +1°C
- Sika® Sigunit®-2206 L Max must be added either with the mixing water for the dry process or with a gauging device suitable for the wet spray process.
- Skilled nozzle operation and thorough mixing within the concrete are essential.
- The fresh concrete characteristics (correct workability) must be adjusted to suit the spray equipment, its capacity, temperature and other local conditions.
- The use of a high precision gauging device is essential in order to achieve correct application without interruptions. The exact dosage depends on cement quality, aggregate granulometry and quality, concrete and accelerator temperature, substrate humidity, output rate etc. Suitability tests must be performed.
- Properties of fresh concrete (suitable workability) must be regulated in order to adjust to shotcrete machines and their capacity, ambient temperature and other local conditions.
- Sika® Sigunit®-2206 L Max is not compatible with siliceous based and non alkali accelerators. In case of use of Sika® Sigunit®-2206 L Max in pumps or

other equipment that such types of products have been previously used, even at small quantities, thorough cleaning before and after use is recommended. Mixing of Sika® Sigunit®-2206 L Max with non-compatible accelerators can cause sedimentation of immediate solidification of mix.

- Certain superplasticizers are not compatible with Sika® Sigunit®-2206 L Max. Mixing of non-compatible superplasticizers with Sika® Sigunit®-2206 L Max can lead to increased rebound and loss of strength in shotcrete. Consult our Technical Department.
- Low temperatures affect the performance of Sika® Sigunit®-2206 L Max negatively. Preventive measures must be taken in order to protect the accelerator and the concrete.
- Sika® Sigunit®-2206 L Max is not compatible with non-alkali accelerators, such as Sigunit®-49 AF (GR).
- Contact Sika® Technical Services for additional information.

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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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.

Sika Hellas ABEE

15, Protomagias Str.
GR 145 68, Kryoneri, Attica
Tel.: +30 210 81 60 600
E-mail: info@gr.sika.com
www.sika.gr



Product Data Sheet

Sika® Sigunit®-2206 L Max
December 2023, Version 01.01
021401011000000276

SikaSigunit-2206LMax-en-GR-(12-2023)-1-1.pdf