

1. Product Description

StenMix® SUPA 700 is a high-range water-reducing, superplasticizing admixture raw material for Portland cement concrete. It is an ionic polymer based on VAM and maleimide and functions as a strong ionic dispersant for concrete components. It can be used to boost performance of lignosulfonate, BNSF and melamine sulfonate-based admixtures that conform to the requirements of EN 934-2 Table 3 (High-Range Water Reducer/Superplasticizer Standard) and ASTM C 494 Type F (Standard Specification for Chemical Admixtures for Concrete - Water Reducing, High-Range Admixtures).

2. Uses

StenMix® SUPA 700 is suitable for enhancing the dispersion power of traditional superplasticizers. It can be used to increase the water-reducing capacity and expected ultimate strength of the admixture formulation. **StenMix® SUPA 700** can be used to replace about 20% of the naphthalene sulfonate content of high-range naphthalene-sulfonate-based admixtures to achieve PCE-like water reduction performance. This approach is especially common when the clay content of the concrete is expected to be variable.

StenMix® SUPA 700 can be used to replace about 5%-20% of the polymer content of superplasticizers to economize on raw materials. **StenMix® SUPA 700** decreases the water requirement of the concrete by 15%-40% when dosage limits are observed.

3. Application

StenMix® SUPA 700 can be added to the admixture production vessel at any stage of production. After **StenMix® SUPA 700** is added to the mixture, highly alkaline environments (pH > 9) should be avoided. Admixtures containing **StenMix® SUPA 700** provide higher water reduction, cause slightly quicker slump loss and produce a stiffer concrete. If stiffening of the mix and slump loss are excessive, molasses and sodium gluconate can be used to reduce the effects. Depending on the design goals, 5%-20% of the solid content of the superplasticizer must be replaced by **StenMix® SUPA 700**. The recommended dosage for **StenMix® SUPA 700** is highly variable depending on the admixture design and expected performance of admixtures.

Exact dosage must be determined by laboratory trials.

4. Safety

Applicators and supervisors must read the Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be disposed of in compliance with relevant regulations and laws. The application must be carried out by skilled workers under the supervision of experts and the applicators must use all personal protective equipment required for the worksite and the task such as goggles, mask and gloves.

5. Storage

The material must be kept in dry indoor storage. The recommended storage temperature is 5-35 °C. Under these conditions, the material will retain its properties in unopened containers for 12 months from the production date.

High-Range Water Reducing Superplasticizer

Highlights

- Can be used in high-early-strength precast and prestressed concrete
- Unlike lignosulfonates and naphthalene, it is a fully synthetic polymer. Availability and price are not dependent on other industries
- Can be used in high- or variable-clay-content concrete
- VAM-maleimide-based superplasticizer raw material
- Can be used to reduce raw material costs
- Increases performance of superplasticizers



Protect the product from freezing. Low temperatures may cause crystallization of the product; in this case, the product can be used after being warmed to +20 °C and homogenized. After prolonged storage, the product must be stirred thoroughly before use.

6. Disclaimer

This document is provided for general information and is based on **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information without prior notice.

Stenkim® warrants that its products conform to the stated specifications on delivery. The buyer is responsible for determining the product's suitability for the intended purpose and for all conditions of transport, storage, application, and use. **Stenkim®** accepts no liability for results obtained under conditions outside its control. **Stenkim®**'s liability under this warranty is limited to replacement of non-conforming product and excludes any consequential or indirect damages.

7. Technical Data

Property	Method	Result
Appearance - Color		Dark, Transparent Liquid
Chemical Composition		Aqueous solution of sodium salt of poly(maleimide-co-vinyl acetate)
Density @20 °C	EN ISO 2811-2	1.17 ± 0.02 g/cm ³
pH	ISO 4316	6 ± 1
Solids Content (by weight)	EN ISO 3251	32% ± 1%
Viscosity	EN ISO 3219	90 cP
Chloride Content	EN 480-10	≤ 0.1%
Freezing Point	ISO 3016	-5 °C
Shelf Life		1 year
Packaging		1,150 kg IBCs or in bulk

Stenkim® reserves the right to make changes to the values in this table at any time.

