

1. Product Description

StenMix® HIPA 442 HS is a polycarboxylic ether (PC) based high-range water-reducing, high-performance superplasticizing concrete admixture. **StenMix® HIPA 442 HS** conforms to requirements of EN 934-2 Table 3 (High Range Water Reducer/Superplasticizer Concrete Admixture Standard) and ASTM C 494 Type F (High Range Water Reducer/Superplasticizer Concrete Admixture Standard).

2. Uses

StenMix® HIPA 442 HS creates void-free and smooth concrete mass in densely reinforced foundation, wall and column concrete requiring flowable concrete. It can be used in high strength precast and prefabricated concrete production and pre-stressed concrete applications, as well as in concrete work requiring early formwork removal. **StenMix® HIPA 442 HS** when added to ready-mix concrete provides excellent workability.

It eliminates the risk of segregation during concrete transportation and placement. It reduces the amount of vibration required. It allows the concrete to set in normal time without retarding effect.

It increases the impermeability of concrete by reducing the amount of mixing water and consequently reducing the amount of voids in hardened concrete. When used at the appropriate dosage, **StenMix® HIPA 442 HS** reduces the water requirement of concrete by 15-30%.

3. Application

StenMix® HIPA 442 HS is recommended at 0.5% to 2.0% by cement weight. **StenMix® HIPA 442 HS** should not be added directly to dry cement, but should be added to the mixture along with the mixing water during concrete preparation. **StenMix® HIPA 442 HS** should preferably be added to the mixing water at the concrete plant.

The dosage to be used should be determined by laboratory tests related to the required workability and strength.

4. Safety

Applicators and supervisors must read the Material Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be handled in compliance with relevant regulations and laws. The application must be carried out by skilled workers under supervision of experts and the applicators must use all kinds of 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. Protect the product from freezing. Products must be stored at +5 °C to +35 °C in closed conditions protected from direct sunlight.

Shelf life is 1 year without opening the package. Low temperatures may cause crystallization of the product; in this case, the product can be used after heating and homogenizing at +20 °C. The product must be stirred thoroughly before use after prolonged storage.

High Performance Superplasticizer

Highlights

- Polycarboxylic ether-based high-performance superplasticizer concrete admixture
- High-range water reduction
- Used to create void-free and smooth concrete mass
- Can be used with high early strength precast and prestressed concrete
- Eliminates the risk of segregation
- Reduces the amount of vibration required
- Increases the impermeability of concrete



6. Disclaimer

This document is provided for general information and reflects **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information at any time without 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 application and for all conditions of transport, storage, handling, 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		Liquid - Light Yellow
Chemical Composition		Polycarboxylic Ether
Density	EN ISO 2811-2	1.05g/cm ³ ± 0.02g/cm ³
pH	ISO 4316	4.5-6.5
Solid Content	EN ISO 3251	32%
Chloride	EN 480-10	< 0.1%
Freezing Point	ISO 3016	- 5 °C
Shelf Life		1 year
Packaging		200 kg drums or 1,000 kg IBCs

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

