SUPERFLUID 21 EKO

Superplasticizer for concrete, based on polycarboxylates

In compliance with: EN 934-2 T3.1&T3.2

FILED OF APLICATION

Superplasticizer used for production of concrete with high early and final strength characteristics;
Superfluid 21 EKO enables high water reduction, as well as production of concrete with high consistency class;
Superfluid 21 EKO is used for production of concrete applied with pump and concreting densely reinforced sections;
Preparation of concrete with high degree of water-tightness and resistance to atmospheric influences and aggressions;
Preparation of concrete for concreting under water;
Preparation of SCC concrete

PROPERTIES

- Water reduction above 20%;
- High early and final strength characteristics;
- Increased the compactness and water-tightness of concrete;
- Improves the physical and mechanical properties of the concrete;
- Increased resistance to ice and salt debris
- Increased durability of concrete;
- Increased resistance to carbonation;
- Increased resistance atmospheric influences;
- Easy concrete application;

TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	Visual	light yellow liquid
Density (at 20ºC)	ISO 758	(1.06±0.02) g/cm3
pH-value (at 20ºC):	ISO 4316	3,5 - 5,5
Chlorides content:	EN 480-10	≤0.1%
Alkali content:	EN 480-12	≤2.0%

DOSAGE AND PERFORMANCE:

Optimal dosage of Superfluid 21 EKO is between 0,4% to 1,2% of the cement mass in the concrete mix for classical concrete, and 0.8-1.5% of the mass of the particles <0.125mm for self-compacting concretes (SCC). These dosages allow water reduction from 12% to above 20% (Diagram1); Thereby, initial and final strength properties of concrete are increased respectively (Diagram 2).

ADMIXTURES FOR CONCRETE AND CEMENT

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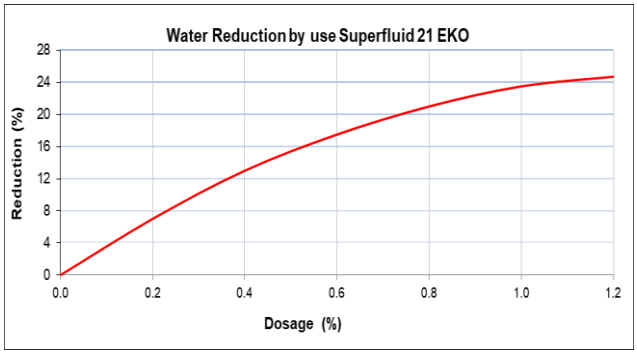

Diagram 1

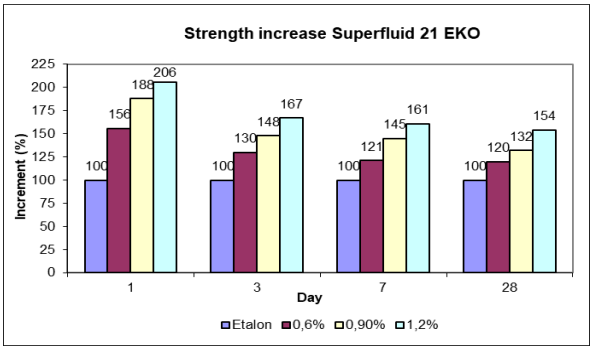

Diagram 2

The optimum dosage of Superfluid 21 EKO is best determined by conducting laboratory or industrial testing. In cases when concrete is applied at high ambient temperatures or prolonged transportation of concrete is required, recommended class of consistency of fresh concrete should be higher - S4 or S5. At normal temperatures (up to 25°C), concrete produced with Superfluid 21 EKO, can be transported and applied with pump in period up to 60 minutes.

At extremely high ambient temperatures, or in cases when production, transport and casting of concrete last Longer than 60 minutes, in addition to Superfluid 21 EKO, it is recommended to use set-retarding admixture USPORUVAC-D2, with dosage which depends in the specific conditions. Alternatively, in these conditions it is recommended to use superplasticzers with consistency retention effect, such as Superfluid 21M EKO or Superfluid 21M1M EKO.
Dosing of admixtures is performed manually or automatically during the concrete production. Best effect is achieved in cases when Superfluid 21 EKO is applied with 20% to 30% from required water quantity at previously prepared mixture of aggregate, cement and 80% from required water quantity. Duration of mixing of concrete when Superfluid 21M1M EKO is used should not to be shorter than 90 seconds.
Effects of overdose: Overdosing of Superfluid 21 EKO can cause segregation of fresh concrete.

COMPATIBILITY

Superfluid 21 EKO is compatible with number of admixtures from ADING production program, such as set accelerators, set-retarders, admixtures for winter concreting, waterproofing admixtures, air-entraining admixtures. If two or more admixtures are used in the concrete mixture, it is necessary to make preliminary tests. Various admixtures are dosed separately (they are not to be inter-mixed prior to application in the concrete mixture). Superfluid 21 EKO is compatible with all types of Portland cement, including sulphate-resistant cements. Superfluid 21 EKO is not compatible and should not be used in combination with the admixtures that contains poly-naphthalene sulphonate, such as: Fluiding, Superfluid, Superfluid-M1, Superfluid-M1M, Superfluid-T, Hidrofob Fluid and Hidrofob-T.

PACKAGING

Plastic cans: 5 and 20 kg
Plastic barrels: 200 kg
Containers:1000 kg

STORAGE

In the original packaging, at temperature between 5°C and 35°C. Shelf life: 12 months.

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CE MARKING

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EN 934-2:2009+A1:2012

SUPERFLUID 21 EKO

Admixture for concrete, superplasticizing admixture

EN 934-2:T3.1&3.2

Maximum chloride ion content:	**0.1%**
Maximum alkali content	**2.0%**
Corrosion behavior:	**Contains components only from EN 934-1:2008, Annex A.1**

Health hazard: Superfluid 21 EKO does not contain toxic substances, contact with the skin and eyes should be avoid, and material should not be swallowed. In case of contact to skin or to eyes, rinsing is required with clean running water. If swallowed, medical assistance must be immediately requested. Additional formations are provided in Material Safety Data Sheet for the material.

Fire: Superfluid 21 EKO is a non-flammable liquid. Additional formations are provided in Material Safety Data Sheet for the material.

Cleaning and deposit: Superfluid 21 EKO is cleaned with water. Old and used packaging must be disposed according to local regulations for that type of waste. Additional formations are provided in Material Safety Data Sheet for the material.

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