

SUPERFLUID 21M EKO

Superplasticizer for concrete, based on polycarboxylates

In compliance with: EN 934-2 T11.1&T11.2

FIELD OF APPLICATION

Superplasticizer used for production of concrete with prolonged workability and retention of fresh concrete rheology characteristics;
 Superfluid 21M EKO enables high water reduction, as well as production of concrete with high consistency class;
 Enables long consistency retention (up to 120 minutes);
 Superfluid 21M EKO is used for production of concrete applied with pump at high altitudes and distances, concreting of densely reinforced sections;
 Enables prolonged transportation of concrete and concreting at high ambient temperatures;
 Production of concrete with high early and final strength characteristics;
 Production of SCC concrete;

PROPERTIES

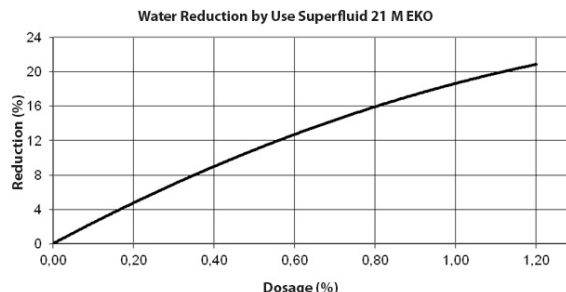
- Water reduction above 20%;
- High early and final strength characteristics;
- Improves homogeneity and cohesion of fresh concrete mixture;
- Increased watertightness of concrete;
- Increased resistance to frost and chlorides;
- Increased durability of concrete;
- Increased resistance to carbonation;
- Increased resistance to atmospheric influences;
- Easy concrete application;

TECHNICAL FEATURES

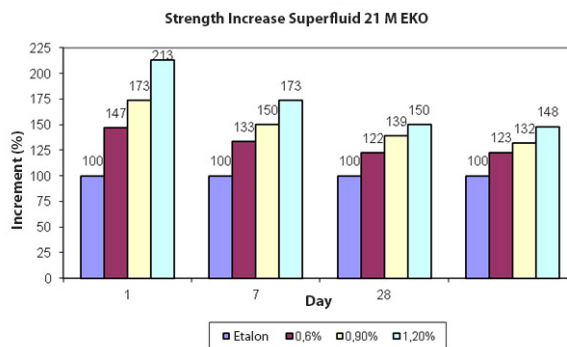
Appearance:		light yellow liquid
Bulk density (at 20°C):	ISO 758	(1.06±0.02)g/cm ³
Chlorides content:	EN 480-10	≤0.1%
Alkali content:	EN 480-12	≤2%
pH-value (at 20°C):	ISO 4316	6-8

DOSAGE

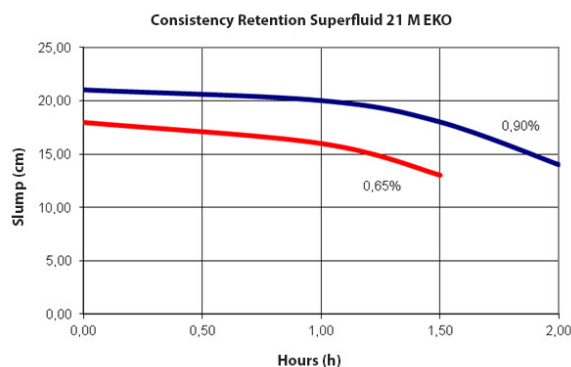
Optimal dosage of Superfluid 21M EKO is 0,4% to 1,2% from cement quantity in concrete mixture. These dosages allow water reduction from 15% to above 20% (diagram1);



Respectively, concrete early and final strength characteristics are increased;



In cases when concrete is applied at high ambient temperatures or prolonged transportation of concrete is required, recommended dosage are above 0,8% and class of consistency should be S4 or S5;
 At normal temperatures (up to 25°C), concrete produced with Superfluid 21M EKO, can be transported and applied with pump in period up to 120 minutes.



At extremely high ambient temperatures, or in cases when production, transport and casting of concrete last longer than 120 minutes, in addition to Superfluid 21M EKO, it is recommended to use set-retarding admixture USPORUVAC-D2, with dosage that depends on the site conditions.

Dosing of admixtures is performed manually or automatically during the concrete production. Best effect is achieved in cases when Superfluid 21M EKO is applied with 20% to 30% from required water quantity at previously prepared mixture of aggregate, cement and 70% to 80% from required water quantity;

Duration of mixing of concrete when Superfluid 21M EKO is used should not to be shorter than 90 seconds. EKO is used should not to be shorter than 90 seconds.

Effect from overdosing: Overdosing of Superfluid 21M EKO can cause segregation of fresh concrete.

COMPATIBILITY

Superfluid 21M EKO is compatible with number of additives from ADING production program, such as set accelerators, set-retarders, admixtures for winter concreting, waterproofing admixtures, air-entraining admixtures.

If two or more additives are used in the concrete mixture, it is necessary to make preliminary tests. Various additives are dosed separately i.e. they are not to be inter-mixed prior to application in the concrete mixture.


Superfluid 21M EKO is compatible with all types of Portland cement, including sulphate-resistant cements. Superfluid 21M 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 and Hidrofob-T

PACKING

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

STORAGE

In original package at temperatures from 5°C to 35°C, protected from direct sunlight.
Shelf life: 12 months.

 2032
ADING AD Skopje Novoselski pat (street 1409) No.11, 1060 Skopje, Macedonia 14 2032-CPR-08.40A
EN 934-2:2009 SUPERFLUID-21 M EKO Set retarding/high range water reducing/superplasticizing admixture EN 934-2:T11.1&11.2
Maximum chloride ion content: 0.1% Maximum alkali content: 2.0% Corrosion havior: Contains components only from EN 934-1:2008, Annex A.1

Health hazard: Superfluid-21M EKO does not contain toxic substances, however attention must be paid to avoid contact with the skin, eyes or not to 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-21M EKO is a non-flammable liquid. Additional formations are provided in Material Safety Data Sheet for the material.

Cleaning and deposit: Superfluid-21M 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.