

SUPERFLUID 21F

Admixture for concrete, Superplasticizer, based on polycarboxylates

In compliance with: EN 934-2: T7

FIELD OF APPLICATION

Preparation of concrete with extremely high initial and final strength characteristics;
Production of prefabricated concrete elements;
Fast release of formwork;
Superfluid 21F enables high water reduction, as well as production of concrete with high consistency and low W/C-ratio (in compliance with EN934-2: T3,1 and T3,2);
Superfluid 21F is used for production of concrete for concreting densely reinforced sections;
Preparation of concrete with high resistance to water ingress and atmospheric influences;
Preparation of concrete used for concreting under water;
Preparation of self-compacting concrete (SCC).

PROPERTIES

- Water reduction in concrete above 25%;
- Accelerates process of hydration of the cement and development of high early and final strengths;
- Enables prolonged workability of concrete (up to 120 min);
- Increased the compactness and water-tightness of concrete;
- Improves the physical and mechanical properties of the concrete;
- Increased resistance to ice and chlorides;
- Increased durability of concrete;
- Increased resistance to carbonation;
- Increased resistance atmospheric influences;
- Easy concrete application;

TECHNICAL FEATURES

| PROPERTY | METHOD | DECLARED VALUE |
|---------------------|-----------|------------------------------|
| Appearance | Visual | colored liquid |
| Density (at 20°C) | ISO 758 | (1.1±0.02) g/cm ³ |
| pH-value (at 20°C): | ISO 4316 | 2,5-4,5 |
| Chlorides content: | EN 480-10 | ≤0.1% |
| Alkali content: | EN 480-12 | ≤2.0% |

DOSAGE AND PERFORMANCE:

Optimal dosage of Superfluid 21F is between 0,3% and 1,0% from cement quantity in concrete mixture for standard concrete, and 0,8% to 1,2% from cement quantity in concrete mixture for SCC. These dosages allow water reduction from 5% to 25%.

The optimum dosage of Superfluid 21F is best determined by conducting laboratory or industrial testing.

At normal temperatures (up to 25°C), concrete produced with Superfluid 21 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 21F, it is recommended to use set-retarding admixture Usporuvac-D2, with dosage which depends in the specific conditions.

Dosing of admixtures is performed manually or automatically during the concrete production. Best effect is achieved in cases when Superfluid 21F 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 21F is used should not to be shorter than 90 seconds.

Effects of overdose: Overdosing of Superfluid 21F can cause segregation of fresh concrete.

COMPATIBILITY

Superfluid 21F 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 i.e. they are not to be inter-mixed prior to application in the concrete mixture. Superfluid 21F is compatible with all types of Portland cement, including sulphate-resistant cements.


PACKAGING

Plastic cans: 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.

CE MARKING

| | |
|---|---|
|  2032 | |
| ADING AD Skopje, Novoselski pat (ul 1409) br.11 1060 Skopje, North Macedonia 08 GACC001/7 EN 934-2:2009+A1:2012 SUPERFLUID 21F Hardening accelerating admixture for concrete EN 934-2:T7 | |
| Chloride ion content | ≤ 0,1% by mass |
| Alkali content | ≤ 2,0% by mass |
| Corrosion behavior | Contains components only from EN 934-1:2008, Annex A.1 |

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

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