

# SUPERFLUID

*Superplasticizer for concretes and mortars, with a high degree of water reduction (Water-reducing admixture)*

*In compliance with: EN 934-2 (Table 3.1 and 3.2); ASTM C494 type F; BS5075 part 3*

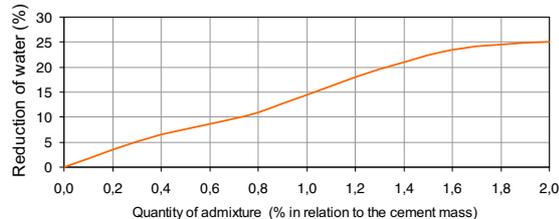
## Field of application:

For attainment of high early and final strengths in concretes. For concretes cast with considerably reduced W/C ratio, heavily reinforced cross sections, pumped concrete, abrasion resistant concretes, concretes possessing higher degree of watertightness and resistance to attack i.e. aggression (sulphates, oils etc). Suitable for preparation of grouting mixtures.

## Properties:

- Reduction of water up to 25%;
- Increases the compactness of concrete;
- Increases the early and final strengths of concrete;
- Improves the workability of concrete without extra addition of water;
- Reduces shrinkage of concrete which occurs during hydration of the cement;
- Enables improved surface finishes for concrete surfaces;
- Does not contain chlorides;

Reduction of water in accordance with EN 480-1 and EN 934-2. Table 3.1



## Technical features:

Type:	Naphtalene sulphonate
Appearance:	brown liquid
Dry substance:	38,0±2,0
Bulk density:	1,18±0,03 g/cm <sup>3</sup>
Chlorides content:	none
Alkali content:	<5,0%
pH-value:	7,5±1,0

## Dosing:

Optimum dosing of Superfluid is best determined by preliminary tests at that employing the materials and conditions which would occur in practical use of the concrete. Dosing is 0,6-1,5% in relation to the cement mass, depending on the required reduction of water which is to be attained, quantity of cement in the concrete mixture, type of cement etc.

Admixture dosing is performed either manually or by means of automated batch meters. The best would be to add it into the mixer during preparation of the concrete mixture, more precisely into the water required for the preparation of concrete. Mixing time duration of mechanical mixing of the concrete mixture should be increased by 50% in relation to mixing time duration for concretes without admixture.

If under normal temperature conditions, the time for transportation and placement, is longer than 30-40 minutes, then dosing is performed immediately prior to the placement - in a mixer, where additional mixing is performed, at least 5 minutes.

Under normal conditions, the concrete prepared with Superfluid should be placed not later than within 30-40 minutes, during which period concrete retains the required consistency. The initial properties of the concrete mixture are reanimated by repeated dosing of the admixture.

Outdoor temperature	[°C]	10	20	30
Workability time for fresh concrete with slump 16-18 cm	min.	60	30	20
Workability time for fresh concrete with slump 22-24 cm	min.	90	60	40

## Effect due to overdosing:

The increased dose has no harmful consequences for the concrete, however could cause low retarding of the hardening process of concrete.

## Compatibility:

Superfluid is compatible with a number of admixtures of ADING's portfolio of products, except for polycarboxilate-based admixtures. If the concrete mixture uses two or more admixtures, it is necessary to perform preliminary tests. Different admixtures are batched separately i.e. are not intermixed with each other prior to insertion into the concrete mixture. Superfluid is usable with all types of Portland cements, also including sulphate resistant cements.

## Packing:

plastic cans:	5, 12 and 25 kg.
drums:	240 kg.
containers:	1200 kg.

## Storage:

In original packing, at a temperature from 5°C to 35°C and protected against direct influence of sunbeams. Shelf life: 12 months.

### Health hazard:

Superfluid does not contain toxic substances; nevertheless, it is necessary to take care not to come to contact with skin, eyes or not to be swallowed. In case of splashing on the skin or in the eyes, it is necessary to rinse with pure flowing water. If it has been swallowed, it is necessary to ask for medical assistance.

### Fire:

Superfluid is a non-flammable liquid.

### Cleaning and discarding:

Cleaning of the Superfluid residues is by using water. The old and used packing should be discarded in accordance with the local relevant regulations for that kind of waste.