



DATASHEET

# MULTIPLAST<sup>®</sup> SUPERFLOW-100

Polycarboxylic Ether (PCE) based, Super Plasticizer for High Grade Concrete

## INTRODUCTION:

**SUPERFLOW-100** is an admixture based on new generation modified Polycarboxylic ether. It is manufactured specially for application in high performance concrete that allows much greater water reduction or alternatively extreme workability of concrete is incorporated. This is achieved without undesirable side effects such as excessive air entrainment or set retardation.

## USES:

- High early and ultimate strength
- Production of self compacting concrete
- High workable concrete with no segregation or bleeding
- Concrete containing pozzolans such as microsilica, GGBFS, PFA including high volume fly ash concrete

## BENEFITS:

**SUPERFLOW-100** increases early and 28 days strength, if advantage of water reduction is taken. It is used in precast concrete work and in prestressed concrete. Improves cohesion thus aids pumping of concrete. Facilitates rapid placing of concrete with no need of vibration hence reduced labour cost in placing. Makes the concrete denser, hence water tightness and durability is increased.

**Increased Workability:** **SUPERFLOW-100** when incorporated in concrete mixes increases the workability without additional water, thus leading to easy placement and finishing without the risk of segregation and bleeding. To achieve longer workability period use **Superflow-300** instead.

**Increased Strength:** **SUPERFLOW-100** can be used to reduce water for a given workability leading to increased in early and ultimate (28 days) strength. Such high early strength and early stripping of forms leads to increased productivity on precast concrete and the production of high strength concrete without increasing cement content.





### Chemistry

**Superflow-100** is based on carboxylic ether polymer with long side chain and high molecular weight. During the mixing process of concrete, the **Superflow-100** initiates electrostatic dispersion mechanism. The side chains linked to the polymer generate additional steric hindrance which stabilises the cement particles' ability to separate and disperse. Thus steric hindrance provides a physical barrier between the cement and cementitious materials, which effectively gives flowable concrete with very low level of water demand.

### TECHNICAL DATA:

<b>Physical State</b>	Yellowish free flowing Liquid
<b>Chloride Content (IS-456 and BS-5075)</b>	Nil
<b>Standard</b>	ASTM C494 Type F
<b>Air Entrainment</b>	< 1%
<b>Normal Dosage, per 50 kg cement</b>	200 to 800 ml
<b>Sp. Gravity</b>	1.09 (approx.)

### APPLICATION DATA:

**SUPERFLOW-100** can be used with all types of Portland cements. It has no significant effect on setting time at normal dosage levels. It can be used in mortar grouting of prestressed wires. The normal dosage is 200ml to 800ml per 50 kg of cement and cementitious material. However, the optimum dosage should be determined by site trials. Higher dosages can be used with suitable changes in the mix especially sand to avoid segregation if no water reduction is made. Overdosing up to double the normal dosage levels may lead to retardation of setting times and may tend to segregate and production of ultra fluid concrete.

### Compatibility:





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**Superflow-100** is compatible with most of **MULTIPLAST** range of products. It is recommended to consult Multichem Technical Services Dept. For self consolidating concrete use **Superflow VMA** as a viscosity modifying agent.

## Direction for Use:

**Superflow-100** is a ready-to-use product which is added into concrete along with mixing water. Add 50-70% of water to the mix first. The remaining water is added along with Superflow-100 to get maximum plasticizing effect.

## CLEANING

All tools should be cleaned with water immediately after use.

## STORAGE:

Store in dry, frost-free conditions at moderate temperature not **greater** than 25 °C.

## PACKAGING:

**Pack Size: 100, 200 lit drums**

## SAFETY DATA:

- Irritating to eyes, respiratory systems and skin.
- Risk of serious damage to eyes.
- Keep out of reach of children. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- After contact with skin, wash immediately with plenty of clean water.
- Wear suitable protective clothing, gloves and eye/face protection.

Please consult our technical department for further information.

## WARRANTY

Multichem warrants SuperFlow-100 to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the ingredients or from





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the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of SuperFlow-100.

Because the Multichem does not perform the actual installation, it cannot be held responsible for the results of the application. Multichem specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques.

This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Multichem part. Multichem neither assumes nor authorizes any person to assume for Multichem any liability in connection with the sale and installation of SuperFlow-100.

Because of constant improvement of manufacturing techniques and formulations, Company reserves rights to change this datasheet and its contents without prior notice.



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