



# FAIRFLO<sup>TM</sup> 160

## ULTRA HIGH PERFORMANCE SUPER PLASTICIZER

### BENEFITS

- Increase workability- high early and 28 days strength, if advantage of water reduction is taken
- Makes concrete denser hence durability increases
- Decrease the risk of shrinkage
- Improves workability & high efficiency
- Water reducing significantly improves compressive strength
- Non flammable
- Minimizes segregation and gives better finish
- No effect on concrete setting in winter season
- Ideal for mass concreting & pavement concrete

### PRODUCT

**FAIRFLO 160** is ultra high range water reducing admixture for concrete conforming to **ASTM C-494 type 'G' & IS 9103-1999**.

**FAIRFLO 160** is a Special PCE polymer based solution supplied as a Amber Color Liquid which instantly disperses in water. The powerful dispersing agent of the high range water reducing super plasticizer can be used in many ways to obtain dense, high strength durable concrete (M-40 onwards). The high water reduction properties makes an ideal application in precast concrete, where high early strength is of paramount importance when incorporated in concrete increases the workability without risk of segregation & bleeding. **FAIRFLO 160** also retains the slump for much longer time which facilitate easy placement

### INCREASES STRENGTH

**FAIRFLO 160** can be used to reduce up to 30% water for a given workability leading to increased early and ultimate (28 days) strength. Such high early strength and early stripping of forms lead to increased productivity on precast concrete and the production of high strength concrete without increasing cement content.

### INCREASES WORKABILITY

**FAIRFLO 160** when incorporated in concrete mix increases the workability without additional water, thus leading to easy placement and finishing without the risk of segregation and bleeding, also it retains the slump for longer time which facilitates easy placement.

### USES

- Ultra strength concrete
- Concrete to be pumped
- Self-compacting concrete
- Precast
- High rise building

### DIRECTION TO USE

**FAIRFLO 160** is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been

added. The addition of **FAIRFLO 160** to dry aggregate or cement is not recommended.

### DOSAGE

Optimum dosage of **FAIRFLO 160** should be determined with trial mixes. As a guide, a dosage range of 800ml to 1500ml per 100kg of cementitious material is recommended as a starting point. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required.

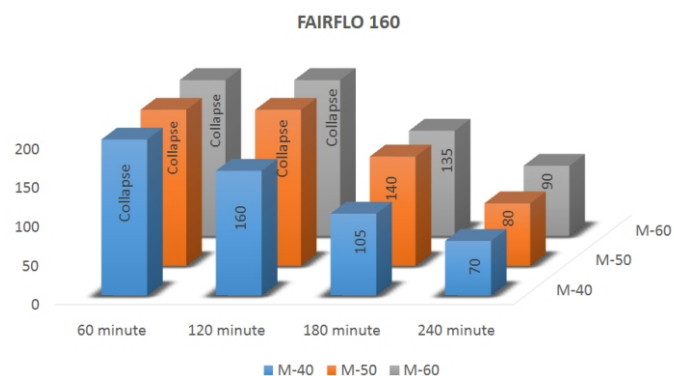
Thorough mixing is essential and a minimum mixing cycle, after the addition of the **FAIRFLO 160**, of at least 180 seconds for forced action mixers is recommended.

### TYPICAL PROPERTIES

- Chloride content: <0.2 % as per 9103:1999
- pH: =Min 6.0

### TYPICAL TEST PROPERTIES

Trial results with standard mix designs at different grade from M20 to M45. Brand and grade of cement: Siddhi OPC-53; Sand zone: zone IV.



### SHELF LIFE AND STORAGE

**FAIRFLO 160** will have a shelf life of **12 months** in unopened containers when kept in dry conditions at a temperature between 5°C to 35°C. Material must be kept under shaded area and away from direct sunlight. Storage at higher temperature or high humidity may reduce shelf life.

### COMPATIBILITY

**FAIRFLO 160** is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers

**FAIRFLO 160** is also compatible with slag and pozzolans such as fly ash, metakaolin and silica fume.

### WORKABILITY

**FAIRFLO 160** ensures that rheoplastic concrete remains workable in excess of 2 hours at +25°C. Workability is dependent on

# FAIRFLO 160<sup>TM</sup>



temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability. It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

## MECHANISM OF WORKING

While traditional admixtures consist of polymers which are absorbed by the cement granules; which wrap around the granules' surface areas at the very early stage of the concrete mixing process. The sulphonic groups of the polymer chains increase the negative charge of the cement particle surface and disperse these particles by electrical repulsion. This electrostatic mechanism causes the cement paste to disperse and has the positive consequence of requiring less mixing water to obtain a given concrete workability.

**FAIRFLO 160** has a different chemical structure from the traditional superplasticisers based on PCE polymers (second generation PCE polymers). The third generation **FAIRFLO 160** is specially engineered for ready-mix concrete. The particular configuration of PCE polymer, allow its delayed and sustained absorption on to the cement particles and disperse them efficiently. As compared with other PCE superplasticisers, it is possible to obtain a high quality concrete mix with accelerated strength development and extended workability without delayed setting characteristics. It allows the production of high performance concrete and/or concrete with high workability.

## PACKAGING

**FAIRFLO 160** is supplied in drums and in bulk quantity on request.

## HEALTH & SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, and skin. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item.

## QUALITY ASSURANCE

Fairmate manufactures entire range of construction chemicals under compliance of ISO 9001, ISO 14001 & ISO 45001 (Occupational Health and Safety) certified by ISOQAR/UK.

## TECHNICAL SERVICE

**Mix design** : Fairmate has a dedicated advisory service on Concrete mix design and can be contacted if assistance is required.

While new advances and changes will take place but one thing will never change is quality and meeting special needs of our customers. Our quality control laboratory and technical experts are available to provide additional information and technical assistance. We are eager to work with you in development of new product and resolve your problem.

## OUR RANGE OF PRODUCTS

<b>CONCRETE ADMIXTURES</b> <b>WATERPROOFING SYSTEMS</b> <b>ENGINEERING GROUTS</b> <b>INDUSTRIAL FLOOR SURFACES</b>	<b>CONCRETE REPAIRS</b> <b>SURFACE TREATMENT</b> <b>PREPACKED CONCRETE MORTAR</b> <b>PROTECTIVE COATING</b>	<b>HIGHWAY REPAIR</b> <b>ARCHITECTURAL FINISH</b>
---	--	--

"Contact us to discuss any potential requirement and you will be assured of a rapid and effective response - that's guarantee !!"

Complete range of construction chemical products - Foundation to Finish



**Corporate Office**  
**FAIRMATE CHEMICALS PVT. LTD.**  
8, "SAI SUDHA", Arunoday Society,  
Alkapuri, Vadodara 390 007. Gujarat, India

In technical collaboration with RBP Ltd. UK  
**Always better than the best in Quality, Services & Values**

+91 265 2330803, 2331193  
+91 265 2358173

**1800 12345 34** (Toll Free)

sales@fairmate.com

www.fairmate.com



### International Manufacturing Hubs / Offices:

AUSTRALIA BANGLADESH BHUTAN BRAZIL ESTONIA INDONESIA KENYA MYANMAR NEPAL PHILIPPINES QATAR RUSSIA SRI LANKA USA VENEZUELA

The information given in this data sheet is based on both the current development work and many years of field experience. Whilst every effort is made to ensure that the information is reliable, we cannot accept the responsibility for any work carried out with our materials as we have no control over methods of application, site conditions etc. The user of the product must test the product's suitability for the intended application and purpose. In view of the continuing research and development being undertaken in our laboratories. Fairmate reserves the right to change the properties of its products. We advise customers in their own interest to ensure that this data sheet has not been superseded by a more up-to-date publication. All products are sold subjected to our standard conditions of sale which are available on request. Field services, where provided, does not constitute supervisory responsibility. For additional information, please contact our local FAIRMATE representative.