

## ADT ADMIX HPC 5080 (Superplasticizer Admixture)

High PC Based High Water Reducing & Special for Flow Chemical

### DESCRIPTION :

ADT ADMIX HPC 5080 has been primarily developed for application in the ready mixed and precast concrete industries where the highest durability and performance is required. ADT ADMIX HPC 5080 is compatible with all Portland cements meeting recognized international standards and is free from chlorides and has been formulated to comply with ASTM C-494 for types A and F admixtures.

### TECHNICAL DATA :

- Appearance/Colour - Light Brown/Light Red
- Form - Viscous Liquid
- Specific Gravity @30°C - 1.15 ± 0.02
- Chloride Content - NIL
- Solid Content - 34% - 38%

### APPLICATION METHODOLOGY :

ADT ADMIX HPC 5080 is especially suitable for the production of concrete mixes which required high early strength development. Powerful water reduction and excellent flowability.

- Pumped concrete
- Fast track concrete
- Precast concrete
- Self compacting concrete.
- High Grade concrete (M-50 and Above & Special Myone Construction)
- Concrete requiring long workability and long flow.

### ADVANTAGE :

- Pronounced increase in the early strength development resulting in very economical stripping times for precast and in situ concrete.
- Extremely powerful water reduction, resulting in high density, high strength and reduced permeability for water.
- Excellent Plasticizing effect, resulting in improved flowability, placing and compacting behavior.
- ADT ADMIX HPC 5080 is differentiated from those superplasticisers in that it is based on a unique polycarboxylate ether polymer with long lateral chains. Conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the time of mixing, get adsorbed into the surface of the cement particles. This adsorption takes place at a very early stage in the hydration process.
- The sulphonic groups of the polymer chains increase the negative charge on the surface of the cement particle and dispersion of the cement occurs by Electrostatic repulsion.
- The long lateral chains of ADT ADMIX HPC 5080 greatly improve cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs as described previously but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance that stabilizes the cement particles capacity to separate and disperse.
- This mechanism provides flow-able concrete with greatly reduced water demand. The excellent dispersion properties of ADT ADMIX HPC 5080 make it the ideal admixture for precast concrete where low water cement ratios are required.
- Always conduct trial before combining products in specific mixes and contact our technical service department for information about specific combination.
- High water reduction.
- Excellent early and ultimate strengths. Possibility of elimination of steam curing. Less permeable. Highly durable concrete.



**DOSAGE :**

Generally, 0.3 – 1.4 % by cement. Do not allow over dosing. Due to overdosing setting time will be extended gloriously. It is advisable to carry out a trial to establish the exact and optimal dosage depending upon set retardation required

**HEALTH & SAFETY:**

- Use goggles and hand gloves during application
- Clean hands with warm soap water after application

**PACKAGING**

Available in 20 kg / 235 kg HDPE drums and in bulk Tanker

**STORAGE :**

Must be stored in original packing, in ambient temperature, dry place under shed. Protect from direct sunlight. The best use before end date of each batch appears on the product label.

**SHELF LIFE : 12 months** in original sealed condition under appropriate cooling condition