**EN 934-2 TABLE: 5**

**CONAIR**

**Air entraining admixture**

**Admixtures for concrete;** material added during the mixing process of concrete in a quantity not more than 5 % by mass of the cement content of the concrete, to modify the properties of the mix in the fresh and /or hardened state. **Air entraining admixture;** Admixture which allows a controlled quantity of small, uniformly distributed air bubbles to be incorporated during mixing which remain after hardening.

**Description**

Synthetic based, liquid air entraining concrete admixture that is effective even at low doses. Improves workability and strength of concrete. Highly effective in protecting the concrete from freezing-thawing by means of homogenously distributing millions of air bubbles in cement particle size (10-100 microns) within the concrete.

**Chemical Properties**

**EN 934-2 Çizelge 1 - General requirements**

|  |  |  |
| --- | --- | --- |
| **Characteristics** | **Specification** | **Test Method** |
| Homogeneity | Homogeneous when used. Segregation shall not exceed the limit stated by the manufacturer. | AY-TA.001  Visual |
| Color | Uniform and similar to the description declared by the manufacturer. | AY-TA.001  Visual |
| Relative Density | D ± 0.03 if D > 1,10  D ± 0.02 if D ≤ 1,10  Where D is the manufacturer's stated value of density. | TS 781 ISO 758 |
| pH Value (20 0 C) | Manufacturer's stated value ± 1 or within manufacturer's stated range. | TS 6365 EN 1262 |
| Dry Content (%) | 0.95 T ≤ X < 1.05 T, if T ≥ 20 %  0.90 T ≤ X < 1.10 T, if T < 20 %  T is manufacturer's stated value % m/m.; X is test result % by mass on dry material content. | TS EN 480-8 |
| Chloride Content (%) | Either ≤ 0.10 % by mass or not above the manufacturer's stated range. | TS EN 480-10 |
| Alkali Content (%) | Not above the manufacturer's stated maximum. | TS EN 480-12 |
| Effective Component (%) | Infrared spectra to show no significant change with respect to the effective component when compared to reference spectrum provided by the manufacturer. | TS EN 480-6 |
| Freezing Point (%) | Not above the manufacturer's stated maximum. | AY-TA.011 |
| Corrosion Behavior | Contains only components according to EN 934-1:2008, Annex A.1 | |
| Dangerous Substances | Comply with annex ZA | |
| Dosage | Dosage of contribution is based on the aggregate properties, water quality, concrete class, water-cement ratio and temperature of place. | |
| Shelf Life | 12 Months | |

**Performance requirements**

**EN 934-2 Table 5 Specific requirements for air entraining admixtures (at equal consistence)**

|  |  |  |
| --- | --- | --- |
| **Essential Characteristics** | **Performance** | **Harmonised**  **Technical Specification** |
| Air content in fresh concrete  (entrained air) | Test mix ≥ 2,5 % by volume above control mix  Total air content 4 % to 6 % by volume | EN 12350-7 |
| Air void characteristics in hardened concrete | Spacing factor in test mix ≤ 0,200 mm | EN 480-11 |
| Compressive strength | At 28 days : test mix ≥ 75 % of control mix | EN 12390-3 |

**Areas Of Application**

Used in concrete roads,

Runway concretes,

Airport constructions,

In dams, water treatment plants, water tanks and channels,

Where concrete is poured to ensure imperviousness,

In producing concrete with freeze-thaw resistance,

In producing light hollow concrete,

In ready-mix concrete.

**Properties / Advantages**

Improves durability.

Increases the resistance to the effects of defroster salts.

Has a positive effect on the workability of concrete.

Improves freeze-thaw resistance of concrete.

Improves the resistance of concrete to freezing and temperature.

Increases water tightness.

**Application / Warning**

The amount and type of the aggregate used, cement dosage, cement type, fineness, viscosity, water/cement ratio and temperature may have negative effects on the amount of air. In such cases, it may be necessary to maximize the dose of the admixture (up to 0.13%).

The increase in the amount of air adversely affects the concrete strengths (the strength drops by 5.0% by each addition of air by 1.0%).

It is recommended to conduct the necessary tests and adjust the dose so that the mixture has an air content by 4-6% as measured with an air meter in laboratory environment.

When used in excessive doses, the admixture negatively affects the strengths of concrete.

Is used by adding into the mixture water of concrete or directly mixing into the fresh low-slump concrete.

Should not be directly added onto the dry mixture.

It has no positive or negative effects on setting of concrete.

Does not contain chloride or any other components that result in corrosion in the reinforcements. Therefore, it is suitable for use in reinforced concrete structures.

**Suitability**

Suitable for use with all types of concretes with or without admixtures.

In case it is desired to use high amounts of cements, it is used along with mineral additives such as fly ash, micro silica and cinder.

Steel, polypropylene and organic fibers may be used against shrinkage cracks.

It is recommended to perform tests prior to using the products.

In case of mixing with other admixtures, the performance of the product decreases.

Admixtures should not be stored by mixing together.

Mixing and storage equipment should be properly cleaned.

**Storage/Shelf Life**

Original, unpacked and undamaged products (drums, barrels, containers IBC) should be stored away from direct sunlight and frost at temperatures from +5ºC to +35ºC. In case the product is stored in an unsuitable environment and it freezes, the product should be thawed at ambient temperature without using direct heat and should be stirred using mechanical methods until it is homogenous. When stored under suitable conditions, the shelf life of the product is 12 months from the date of production.

**Health and Safety**

Please use protective clothing, protective gloves, full goggles and a face mask according to Occupational Health and Safety Regulation. Avoid contact with skin and eyes. In case of contact, rinse with plenty of water. In case of digestion, please seek medical attention. For transportation, storage, disposal of the product, its physical, ecological, toxicological information and other details and recommendations please refer to the Safety Data Sheet of the product.