



Technical Data Sheet

POLYTRADE

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Carbofen® NCX

Air Entrainer for Concrete

PRODUCT DESCRIPTION

Carbofen NCX is a natural resin, modified, saponificated and powdered. It has excellent properties as a ready-for-use Air Entrainer for concrete and mortar. Carbofen NCX allows the user to eliminate the process step of neutralization. It is water-soluble and may be added pure to the cement or as an aqueous solution.

Carbofen NCX results from a saponification reaction, between caustic soda (sodium hydroxide) and modified resins. These resins are derived from the synthesis of polyphenolic resin acids extracted from a renewable natural source: resinous parts of *Araucaria angustifolia* pinewood.

SPECIFICATIONS

pH in 2% aqueous solution ASTM E 70	9.5 - 11
Humidity 2h to 120°C ASTM D 889	Max 8
Free Alkali (mg NaOH/g) EQP MA 85	20 - 50

ADVANTAGES OF CARBOFEN NCX

Those are the advantages:

- Higher resistance to cracks caused by freeze-thawing cycles;
- Better chemical resistance to the sulfate;
- Strong reduction in bleeding (water segregation on structure's surface)
- To increase the plasticity the admixture;
- To reduce the Permeability;
- To increase the durability;
- Easy preparation of the admixture.

APPLICATIONS

- Extend the life span of buildings and structures made by concrete or mortar. The air entraining agents have large use in foundations, slabs, dikes, tunnels, canals, bridges, highroads and others, also is indicated for concrete highways projects;
- All types of concrete including light weight and prestressed concrete where optimum air entrainment is desired;
- Imparting improved workability to lean, harsh mixes and to reduce bleeding caused by grading deficiencies in the concrete materials;
- Use in concrete containing Pozzolith or other admixtures (water reducers, accelerators, retarders, densified and water repellents).

PROCEDURE

Dissolve 1 part of Carbofen NCX in 9 parts of water. Do not mixture Carbofen NCX with any other admixture.

Dosages of 50 ml to 70 ml per 50 kg of cement are usually enough to produce a content of the air in the range of 3% and 6% in the concrete. To enhance the properties, these quantities may be increased, provided that experimental tests take place.

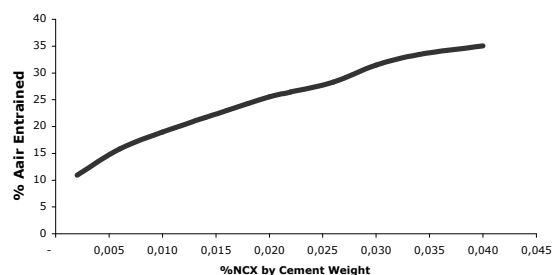
Trial mixes should determine the exact quantity of air entraining CARBOFEN NCX needed, Factors are:

- Concrete making materials; type and brand of cement, sand grading, sand-aggregate ratio, slump, use of extra fine materials such as fly ash and micro silica;
- Conditions of mix;
- Mixing time;
- Temperature;
- Means of conveying and placement.

A regular program of air tests should be instituted in order to adjust the dosage to changing conditions.

EFFICIENCY OF CARBOFEN NCX

Air Entrained in Mortar



Factor W/C Water/Cement	Air Incorporated	Specific Weight (g/cm ³)	Resistency 7 days	Resistency 28 days
0.4	2.456	2.427	30.00	36.82
0.5	2.819	2.344	18.63	24.23
0.6	3.044	2.293	12.00	16.60
0.7	3.445	2.242	9.00	12.22

PACKAGING

Powder product in plastic bags with 20 kg - 44 lb

PRODUCT SAFETY

Read first our Material Safety Data Sheet (MSDS).