

## TECHNICAL DATA FOR BS FUTURA PCX 107-R

High Performance Set Retarding and Stabilizing Admixture for Concrete & Grouts

### Description of BS Futura PCX 107-R

**BS Futura PCX 107-R** is a high-performance liquid set retarding admixture designed to control the hydration rate of cement in concrete, grout and mortar mixes. The formulation is based on advanced polymer technology that provides controlled extension of setting time while maintaining the desired workability and strength characteristics of the concrete.

BS Futura PCX 107-R is a **chloride-free, non-corrosive admixture** compatible with all commonly used cements and cementitious materials. It is particularly suitable for hot weather concreting and large volume pours where extended workability and prevention of cold joints are required.

### Areas of Application

BS Futura PCX 107-R is recommended for use in:

1. Large volume concrete pours
2. Ready mix concrete plants
3. Backfill grout stabilization in tunneling works
4. Concrete pours where cold joints must be avoided
5. Construction joints and extended placing times
6. Hot weather concreting conditions
7. Difficult placement conditions or long transport distances

### Advantages and Benefits

Use of BS Futura PCX 107-R provides the following advantages:

1. Extended setting time allowing longer working period
2. Improved slump retention and workability control
3. Improved surface finish of concrete
4. Helps avoid cold joints in large pours
5. Improved ultimate strength of hardened concrete
6. Better control over slump or flow loss during placement
7. Chloride-free formulation that does not attack reinforcement steel

### Technology in BS Futura PCX 107-R

BS Futura PCX 107-R uses a special polymer composition designed to control the hydration process of cement particles. The technology works by regulating the rate of cement reaction with water, thereby extending the setting time while maintaining workability and later strength development.

This controlled retardation allows the concrete mix to remain workable for longer durations without negatively affecting the final strength characteristics of the hardened concrete.

### Properties of BS Futura PCX 107-R

Property	Value
Appearance	Clear to Light Brown Liquid
Chemical Base	Special Polymer Composition
Density	~1.06 Kg/L at 25°C
pH Value	≥ 6
Solubility	Soluble in Water
Type	Set Retarding / Stabilizing Admixture
Shelf Life	12 Months from date of manufacture

### Dosing Recommendations

Laboratory and site trials should be conducted to determine the optimum dosage of **BS Futura PCX 107-R**.

Typical dosage range:

**0.20% – 1.5% by weight of cement**

The exact dosage depends on:

- Type and quality of cement
- Aggregate characteristics
- Water-cement ratio
- Ambient temperature
- Required retardation period

Higher dosages increase the retardation period.

## Problems from Overdose

In case of excessive dosage of BS Futura PCX 107-R:

1. Initial and final setting times may be significantly delayed.
2. Workability retention period may increase beyond normal limits.

However, **ultimate compressive strength will generally not be affected** if proper curing practices are followed.

## Recommendations on Use

BS Futura PCX 107-R is a liquid admixture added to the mixing water or directly into the concrete mixer during batching.

For best results, ensure adequate mixing and conduct trial mixes to determine the optimum dosage. Compatibility tests are recommended when used with other admixtures.

## General Specification of Product

BS Futura PCX 107-R is a **retarding and stabilizing concrete admixture** designed to provide controlled setting times and improved workability retention in concrete and grout applications.

The product is suitable for **ready mix concrete plants, site batching operations, infrastructure projects, tunneling works and hot weather concreting conditions.**

## Packaging

BS Futura PCX 107-R is available in pack sizes of **20 Kg & 225 Kg**.

## Safety and Handling

Use standard chemical handling precautions:

- Wear gloves and protective goggles
- Avoid contact with skin and eyes
- Ensure adequate ventilation during handling

Refer to the **Material Safety Data Sheet (MSDS)** for detailed safety information.

## Storage and Shelf life

Store the product under shade and protect from extreme temperatures. If exposed to temperatures below **+5°C**, slight solidification may occur; this can be reversed by gentle agitation.

Keep containers tightly sealed after use.

Shelf life is **12 months from the date of manufacture** when stored in unopened containers at **+10°C to +40°C**.

## Disclaimer

The information in this sheet is provided for general guidance and is based on current knowledge and experience. Due to the variety of possible application methods and site conditions, no responsibility is assumed for results obtained under specific circumstances.