

## TECHNICAL DATA GUIDE- CONCRETE ADMIXTURE

### CBEAD EPS

#### Expanded Poly-Styrene Beads for Light Weight Concrete

##### DESCRIPTION

CBEAD EPS is a lightweight filler used in the production of light weight non- structural concrete with densities ranging from 800 to 1400Kgs/m<sup>3</sup>. It is a compound composed of several individual ingredients.

Expanded polystyrene (EPS) is a generic term for polystyrene and styrene copolymers that are expanded into a variety of useful products. CBEAD EPS is supplied in the form of a 3-4mm diameter beads.

CBEAD EPS is loaded with a blowing agent, usually pentane, and other chemical agents and additives that give the beads expansion vibrancy and allow them to be processed and molded into low-density foam articles.

##### TYPICAL APPLICATIONS

- High rise buildings,
- Controlled low strength material,
- Floating marine platforms,
- Large span concrete,
- Structures with long term cyclic loadings,
- For Levelling layer after laying electrical conduits, ducts, and
- Replacements for cinder filling in toilets.

##### FEATURES AND BENEFITS

- High thermal insulation
- High sound insulation
- Light weight
- Extremely durable
- Versatile in strength
- Energy absorbing and high shock absorbance

##### PERFORMANCE TEST DATA

Form	Solid spherical beads
Size	3-4mm in diameter
Color	White or dyed
Bulk Density	10–12 kg/m <sup>3</sup> @ 20°C
Chloride Ion content	≤ 0.2%
Solubility	Insoluble in water
Solubility	Soluble in aromatic hydrocarbons, halogenated solvents & ketones

##### DOSAGE AND DIRECTIONS FOR USE

CBEAD EPS is a hydrophobic material, extremely light with the density of 10–12kg/m<sup>3</sup> which can cause segregation during laying and results in inhomogeneity of the EPS concrete mix, leading to the decrease of the compressive strength.

Based on the design requirements of light weight concrete and the nature of ingredients, the below combination of chemical admixtures shall be used along with combination of CBEAD EPS to have the right balance of fresh wet density, compressive strength, resistance to segregation, easy flowing and self-levelling properties.

- CPLAST 100 (Super plasticizer for water reduction)
- CMATRIX 110 (Rheology enhancing admixture to increase viscosity)
- CAIR 104 (Air entraining admixture)
- CBOND 333 (Adhesive to prevent segregation)

##### PACKAGING

CBEAD EPS is supplied in 3 Kgs HDPE bags



## STORAGE & SHELF LIFE

The shelf life of CBEAD EPS is 1 year for the date of manufacturing. Exposed or opened/ damaged packaging may lead to CBEAD EPS to fly out in the atmosphere due to wind. The containers should be protected from rain, snow, frost, direct sunlight and mechanical damage. Keep away from direct sunlight and other sources of heat or ignition and in a well-ventilated place. Keep away from rain and moist conditions.

## HEALTH & SAFETY

CBEAD EPS has a flash point of 51 – 80°C, Hazardous reactions not likely when properly stored, handled and transported. In use may form flammable/explosive vapor-air mixture. Risk of dust-air explosion is increased if flammable vapors are present. May burn or react violently with fluorine/oxygen mixtures with 50-100% fluorine. Decompose by powerful oxidizing or reducing agents. Exposure to strong oxidizing agents can cause fire or explosion. Powdered material may form explosive dust-air mixtures. For further information refer to the material safety data sheet.

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