

# CWC® CORROBIT (BP)

## Bipolar concrete penetrating corrosion inhibiting admixture

### Description










CORROBIT (BP) is a unique bipolar concrete penetrating type corrosion inhibiting admixture for steel in the reinforced concrete. It is a blend of selected amines through research which preferentially provide protection to steel in both liquid and vapour phases. The vapours penetrate even through the hardened concrete towards steel due to strong affinity.

The migration of CORROBIT (BP) takes place over a prolonged period of time and hence this molecular layer shall continue to protect rebar by its constant presence.

CORROBIT (BP) also enables to reduce concrete porosity through water reduction and thereby improves durability of concrete

### Domains of application

Protection of concrete structures, RCC elements/structures exposed to corrosive environment, Marine structures, structures exposed to saline atmosphere, coastal structures, sewerage systems, etc.

-  Below ground structure such as Pile, pile cap, mat foundation where chloride threshold value is more in the soil.
-  Bridges and flyovers
-  Structures in coastal areas and submerged conditions
-  Power plants
-  Steel plants
-  High rise buildings
-  Structures in sea water
-  Pre-cast Elements
-  Tunnels and underground structures

### Action Mechanism:








CORROBIT (BP) absorbs onto the reinforcing steel and forms a uniform protective film covering both cathodic and anodic active sites on the steel surface. This protective film prevents access of chlorides, moisture, and oxygen to the steel and thereby significantly slows down the rate of corrosion

### Corrosion inhibiting systems

To control corrosion in steel reinforced concrete, the ACI Building Code (ACI 318) requires certain design considerations, such as limiting the water-cementitious materials ratio; providing adequate concrete cover over reinforcing steel; and limiting the initial chloride ion content of the concrete. Additionally, construction practices should be such that a dense, void-free concrete is obtained. In addition to the elements of good concrete practice required by the ACI Building Code, CWC PRODUCTIVE SYSTEM recommends a corrosion inhibiting system that inhibits corrosion at multiple levels for maximum protection.

The basis for this system can be established using CORROBIT (BP) which restricts the ingress of chlorides and moisture and slows the rate of corrosion by forming a protective film on the reinforcing steel. Additional protection can be attained using high-range water-reducing admixtures to provide adequate place ability and consolidation at low water-cement ratios and/or the use of silica fume admixtures to reduce concrete permeability.

### Advantages:

-  Penetrates to rebar over a prolonged period and arrests corrosion of rusting steel.
-  Non-toxic, eco-friendly.
-  Nitrite and chromate free.
-  Non-deleterious unlike conventional rust converters.
-  Effective even in the presence of high number of chlorides.
-  Does not affect bond strength of new concrete to reinforcement bars. Does not entrain air.
-  Does not affect mechanical strength characteristics of concrete/mortar

### Standard Compliance

CORROBIT (BP) has been tested in accordance with various standards such as, ASTM G1, ASTM G3, JIS 1535 (modified) IS9103 for compressive strength, AASHTO – T259, ASTM C1202 and ASTM G109\*.



### Indicative characteristics

Form	: Light Brownish colored liquid
Specific Gravity	: 1.04 ± 0.02
Viscosity at 25°C	: 10 -20sec by Ford Cup B4
pH	: ≥ 9
Chlorides, Nitrates, Suptates	: Negligible

The uniformity parameters like specific gravity, pH, chloride content etc. will vary for specific customer requirements and mix design. Please refer our MTC issued for specific product configuration for measuring our product parameters that will be constantly and consistently administered.

### Application instructions

CORROBIT (BP) may be added with concrete batch water. It should not be mixed with any other admixtures prior to being introduced into the concrete mixer. The use of this admixture does not require changes in normal batching procedures

### Dosage:

Recommended dosage is 2 to 3 Kg / cementations material for basic condition.  
In sever exposed conditions 3 to 5 Kg / cementations material for marine structure subjected to frequent wet and dry.

### Compatibility

CORROBIT (BP) is compatible with PCE and SNF based admixtures, in addition to all types of cement, OPC, PPC, OPC & GGBFS and OPC & Flyash, micro silica. CORROBIT (BP) is also compatible with air entraining, waterproofing, shrinkage reducing concrete admixtures.  
The use of a combination of admixtures in the same concrete mix and or cement replacements may alter the setting time. Trials should always be conducted to determine such setting times

### Additional information

The CWC range of associated products include high strength cementitious, epoxy grout, polyester resin-based mortar, Resin anchoring systems. Also available a range of products for use in construction; viz., admixtures, curing compounds, release agents, flooring systems and repair mortars.

Separate datasheets are available on these products.

### Safety Precautions

Not to be stored at high temperatures for long periods. Should be protected from frost. It is Non-toxic and formulated from chemicals which present no fire or health hazards. Spillages should be washed down immediately with water.

Before use, refer to the Material Safety Data Sheet. The MSDS is available on [www.cwcchemicals.com](http://www.cwcchemicals.com)

### Packaging

- 200kgs Barrel & bulk in 1000 Kg IBC tanker

**Shelf Life:** If stored in unopened containers at normal ambient temperatures, a shelf-life of approximately 12 months.

### Regional offices

#### MUMBAI:

Office No - 616/617, J K Chambers  
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#### For Enquires / Complaints

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