

PRISM JOHNSON LIMITED
RMC India Division
 Construction Chemicals Business

Technical Datasheet

Construction Chemicals

Enduracon CIA 649 – Corrosion Inhibiting Admixture

DESCRIPTION

ENDURACON CIA-649 is bipolar corrosion inhibiting admixture in a liquid form for reinforced concrete and mortar. It provides outstanding resistance against corrosion of rebars. It can be used in reinforced concrete subjected to an aggressive corrosive environment specifically in Chloride induced corrosion.

WORKING PRINCIPLE

By using **ENDURACON CIA-649** the anodic and cathodic reaction of the electrochemical corrosion process is being influenced. The product forms a film on the steel surface, which delays the onset of corrosion and reduces the rate of corrosion significantly. **ENDURACON CIA-649** by virtue of its high vapour pressure & affinity for the embedded metal diffuses through densest concrete to reach the corroding steel. The migration of **ENDURACON CIA-649** takes place over a prolonged period of time and hence this molecular layer shall continue to protect rebar by its constant presence.

TECHNICAL DATA & SPECIFICATION OF ENDURACON CIA-649

Base	Water based organic corrosion inhibitor.
Colour	Amber to brown liquid
Specific Gravity	1.020 – 1.060 at 25°C
Viscosity at 25°C	10 -20 sec by Ford Cup B-4
pH	≥ 9.0
Dry Material Content (%)	14.7-16.2
Mixing	It may be added with concrete batch water. It should not be mixed with any other admixtures prior to being introduced into the concrete mixer.
Effect on concrete properties	No change in physical properties in fresh & hardened concrete in the absence of any other admixtures. However it is essential to carry out trial mix with desired admixtures along with ENDURACON CIA-649
Storage &	Store in a cool place away from direct sunlight. In case of spillage wash with

Handling	water thoroughly
Point of Addition	Addition into wet concrete. Mix along with batch water or at the time of discharge.
Dosage	1.5-2.5 kg per cubic meter of concrete
Chlorides, Nitrates, Suphates content	Negligible

APPLICATION AREAS

Protection of concrete structures, RCC elements/structures exposed to corrosive environment, Marine structures, structures exposed to saline atmosphere, coastal structures, sewerage systems, etc. like bridges, jetties, docks, mooring berths, railway sleepers, chlorinating plants, swimming pools, chimney, cooling towers, power plants, pipelines, etc.

ADVANTAGES

Penetrates to rebar over a prolonged period and arrests corrosion of rusting steel.

Non-toxic, eco-friendly.

Nitrite and chromate free.

Effective even in the presence of high amount of chlorides.

Does not affect bond strength of new concrete to reinforcement bars.

Does not entrain air.

No adverse effect on slump retention

Does not affect mechanical strength characteristics of concrete/mortar.

DIRECTION FOR USE

ENDURACON CIA-649 can be mixed with the gauging water or added directly in the concrete mixer with other admixtures. It may also be added to the concrete in the transit mixer at the point of discharge. It should not be introduced with dry cement.

ENDURACON CIA-649 is used for high-quality concrete. General rules for producing good concrete and placing practices must also be observed. Optional curing of the fresh concrete must also be practiced.

HEALTH AND SAFETY PRECAUTIONS

Wear protective gloves, goggles, and nose masks while handling and using the material. In case of splashes on the skin and contact with eyes wash thoroughly with plenty of water. In case of ingestion and inhalation remove the personnel to fresh air. Seek medical advice in all the above cases. The disposal of excess or spilled material shall be carried out in accordance with local regulations

PACKAGING & DELIVERY

Delivered in 30 kg, 50 kg & 230 kg HDPE barrels.

STORAGE

Keep in cool and dry place under shade and away from direct sunlight

SHELF LIFE

12 months from the manufacturing in original unopened condition.

FURTHER INFORMATION

PRISM JOHNSON LIMITED

RMC (INDIA) Division

Construction Chemicals Business

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