



CRETE™



I-Crete™

Cement and Concrete Mineral Additive

Chemically engineered, high performance mineral additive

I-Crete is a blend of naturally occurring minerals and high performance supplementary cementitious materials that are chemically modified. I-Crete is made primarily from waste byproducts generated by other industries, byproducts that would normally be placed into landfills. The consistent chemical composition and tightly controlled particle size distribution result in highly reactive and superior quality pozzolans for concrete applications.

I-Crete has been chemically engineered using the concepts of solution chemistry and SCM reactivity to increase concrete's mechanical properties and durability. Chemically I-Crete is a heterogenous blend of oxides of calcium, silicon and aluminum with no deleterious impurities. Utilization of I-Crete in concrete not only increases the strength and durability but also provides environmental and economic benefits.

I-Crete Benefits

Cement concretes containing I-Crete additive are

Stronger, sturdier and denser than conventionally produced concrete, partially due to the filling on concrete pores by the reaction products of I-Crete.

High early / ultimate strength, reduced shrinkage.

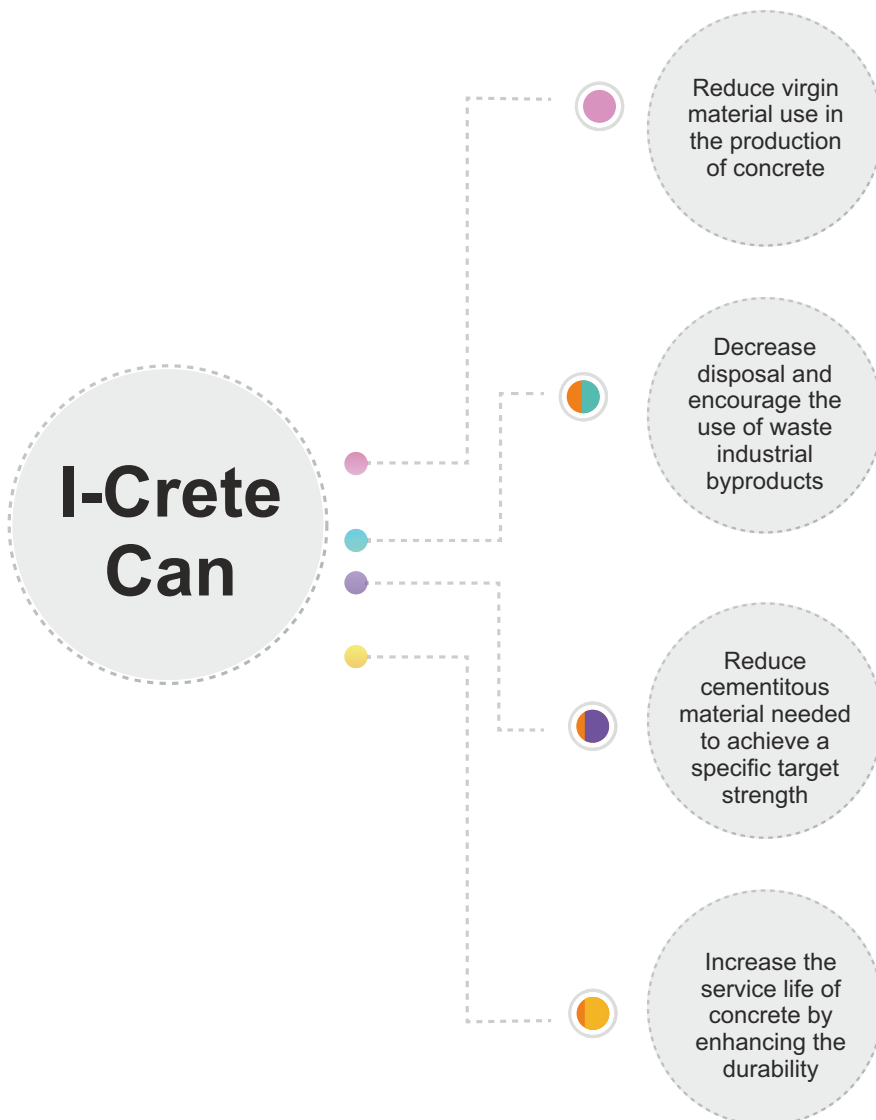
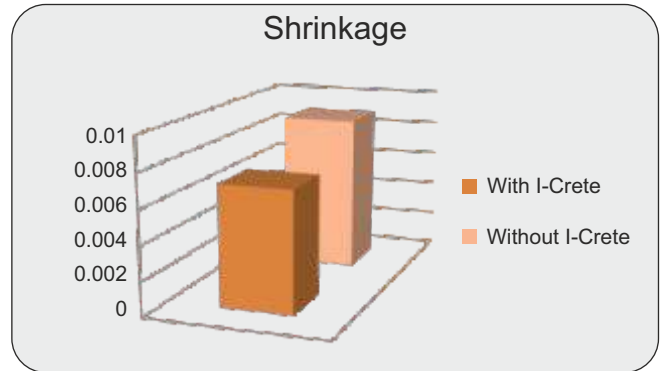
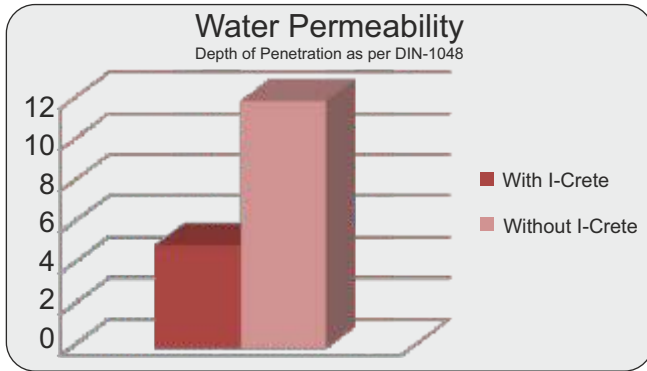
Decreased permeability to water and other corrosive chemicals.

Because of the ability of I-Crete's reaction product to hold extra water the concretes produced by adding I-Crete undergoes less problems associated with shrinkage and bleed water.

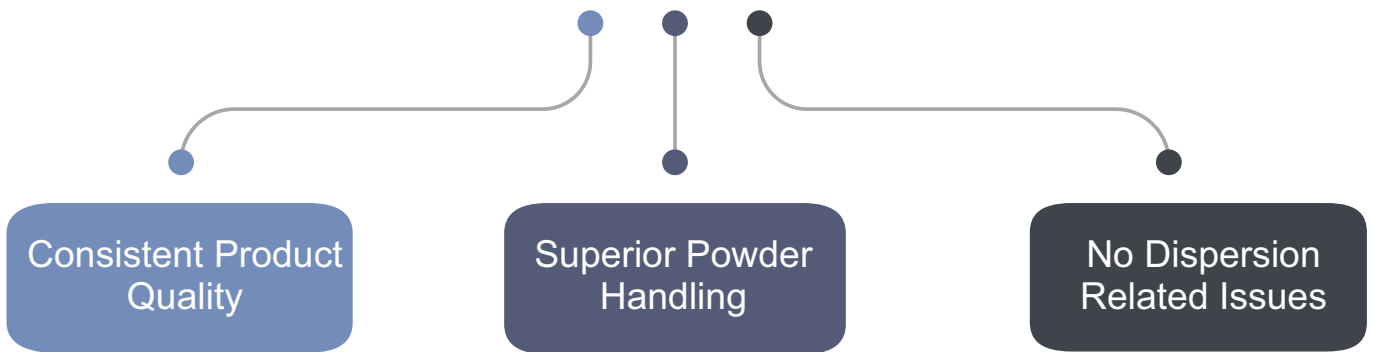
Better economics when compared with similar materials.

Reduced Permeability and Chloride on Penetration

The supplementary cementing reaction of I-Crete Pozzolans provides increased strength and densification of the cementitious matrix, which has the beneficial effect of significantly reducing the porosity and permeability of concrete. One consequence of this is that concretes incorporating I-Crete Pozzolans will have reduced chloride ion penetration making them less susceptible to chloride-induced corrosion of embedded reinforcing steel.



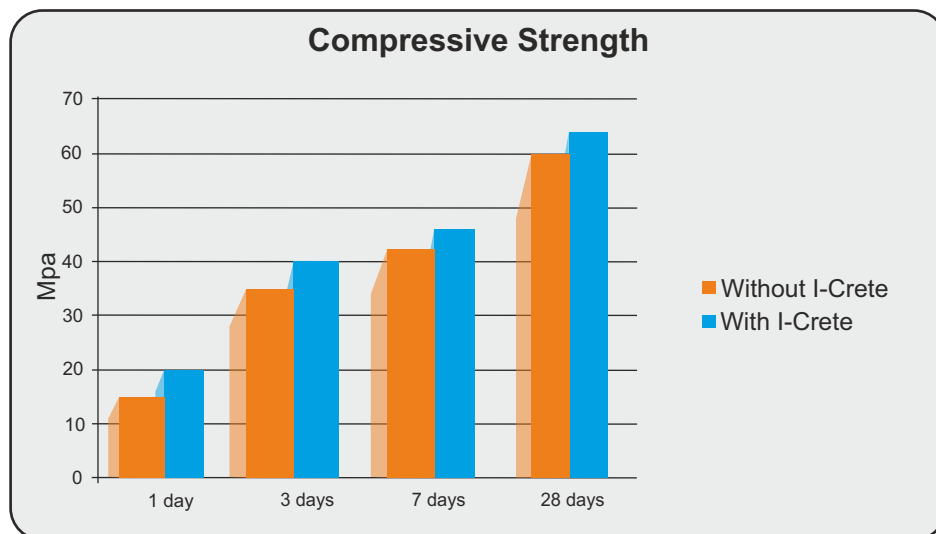
Advantages Over Traditional Pozzolans



Comparison with Other Pozzolans

The following table compares the properties of I-Crete with other common pozzolans.

Pozzolan	Water Demand	Pozzolanic	Color	Reactivity	Percentage Replacement	Water Permeability
I-Crete	Neutral	No	Light Grey	High	3-5%	Decreased
Microsilica	Increased	Yes	Grey	High	5-8%	Decreased
Fly ash	Reduction	Yes	Grey	Low	15-35%	No effect
Metakaolin	Increased	Yes	Off-white	Low	5-8%	Decreased
Blastfurnace Slag	Neutral	No	Off-white	Moderate	25-50%	No effect



Ecomaterials India LLP

8/5, SREYAS Apartments, Race View Colony, 1st Street, Guindy,
Chennai – 600 032, Tamil Nadu | Tel: 044-22441395 | Mob: +91 9500020555
Web: www.ecomaterials.in