POWDERED, DENSIFIED MICROSILICA ADMIXTURE

EUCON MSA

EUCLID CHEMICAL

PRIMARY APPLICATIONS

- High strength concrete
- High density concrete
- Bridge decks
- Parking structures
- Marine environments
- Shotcrete

FEATURES AND BENEFITS

- High ultimate compressive and flexural strength for greater structural durability and increases Module of Elasticity
- High early strength gain for early strip times
- Low permeability for resistance to water, salt and sulfate penetration
- Increased abrasion and chemical resistance for a longer life expectancy and life cycle increase
- Greatly improved freeze / thaw and scaling resistance
- Provides a more cohesive mix that reduces bleeding and segregation
- Improves sustainability and concrete service life

WHAT IS THE PURPOSE OF EUCON MSA?

EUCON MSA is a ready to use powdered microsilica concrete admixture. Since microsilica particle size is generally smaller than other supplementary cementitious materials, adding microsilica results in a more stable concrete matrix that gives significantly higher flexural, bond and compressive strengths. Microsilica will reduce carbonation and permeability to chloride ions, therefore the concrete has improved protection for reinforcing steel.

EUCON MSA reacts chemically with calcium hydroxide and modifies cement paste, yielding a calcium silicate hydrate gel (CSH) that significantly enhances strength and durability. The addition of EUCON MSA into the mix will further the pozzolonic reaction, resulting in more dense, less permeable and high strength concrete.

WHAT CAN BE EXPECTED?

EUCON MSA has been used on numerous projects where the concrete mix was designed for durable High Performance Concrete. It is recommended to incorporate a high range water reducing admixture when higher dosages of EUCON MSA are used. Microsilica will reduce absorbing properties of the cement, making the mix robust and will also improve the resistance to corrosion and sulfate attack. When adding EUCON MSA to concrete the following properties can be expected:

- Significant reduction in permeability
- Mitigates sulfate attack on concrete
- Increased resistance to chloride penetration
- Improved effect on strength and durability at all ages
- Creating High Performance Concrete (HPC)
- Reduced rebound for shotcrete applications