

## SRA-157

### *SHRINKAGE-REDUCING ADMIXTURE FOR CONCRETE*

#### **DESCRIPTION:**

**SRA-157** is a liquid shrinkage-reducing admixture, which can be used, in any Portland cement-based product to significantly decrease drying shrinkage. **SRA-157** is not expansive material, but rather functions by blocking capillaries of pore water, which is the major mechanism that causes drying shrinkage in concrete. **SRA-157** when added to concrete at a rate of 2 % by weight of cementitious can reduce shrinkage (ASTM C 157) by up to 80% at 28 days of age and by up to 50% at one year of age.

#### **ADVANTAGES:**

- High level of shrinkage reduction that can eliminate cracking due to drying shrinkage in restrained concrete
- Reduces potential for cracking
- Improves aesthetics
- Increases water tightness of the mix
- Improves durability of the concrete
- Reduces creep and curling of slabs
- Decreases carbonation at the surface of slabs

#### **DOSAGE RATE:**

**SRA-157** is recommended for use at a dose of 1.0% to 2.5% by weight of cementitious. For maximum effectiveness, use 2% by weight of cementitious. For example, a mix containing 600 lbs./yard, 2% equates to 12 lbs./yard or 1.5 gals. /yard. The shrinkage reduction is generally linear with the dosage within the recommended dosage range, so any dosage, within this range can be selected based on the degree of shrinkage reduction desired. Because local job conditions vary, contact your local RussTech technical service representative for further assistance if using this product outside the recommended dosage ranges or when combining with other admixtures.

#### **TECHNICAL NOTE:**

**SRA-157** does not contain calcium chloride or any chloride-based components. It will not promote or contribute to corrosion of reinforcing steel in concrete.

#### **MIX WATER ADJUSTMENT:**

A water adjustment must be made to allow for the **SRA-157** in the mix. The water in the mix should be reduced by as much as the volume added through the addition of the shrinkage-reducing admixture.

#### **COMPATIBILITY:**

**SRA-157** is compatible with all types Portland cement, class C and F flyash, silica fume, fibers, approved air entraining, water reducing, mid-range water reducers, corrosion-inhibitors, silica fume and superplasticizing admixtures. For best results, each admixture must be introduced separately into the concrete mix.

#### **STORAGE TEMPERATURE:**

**SRA-157** is a potentially combustible material with a flash point of 97 C (207 F). This is substantially above the upper limit of 60 C (140 F) for classification as a flammable material, and above the limit of 93 C (200 F) where DOT requirements would classify this as a combustible material. Nonetheless, this product must be treated with care and protected from excessive heat, open flame, or sparks. For more information consult the Material Data Safety Sheet.

## **EFFECT ON FRESH CONCRETE:**

If **SRA-157** is substituted in the mix with an equal amount of water reduced, there is little or no effect on the slump. The initial set times are typically retarded by about one hour and will improve slump retention. Air entrainment dosage requirements need to be increased when incorporating **SRA-157** to reach normal air contents.

## **EFFECT ON HARDENED CONCRETE:**

Significantly reduces drying shrinkage, consequently reduces or possibly eliminates cracks. Compressive strength may be slightly less than normal. It is reasonable to expect a 0 to 10% strength loss, but this is usually not an issue. For mixes where strength must be maintained, mid-range water reducer such as **FINISHEASE-NC** or superplasticizers such as **SUPERFLO 443, SUPERFLO 2000 SCC**, or **SUPERFLO 20000RM** can be incorporated to reduce water to offset any strength reduction.

## **PACKAGING:**

3.5-gallon pails, 5-gallon pails, 55-gallon drums and 275-gallon totes.

## **SHELF LIFE:**

18 months

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