

RUSSTECH®

SRA-157 EXT

SHRINKAGE-REDUCING ADMIXTURE FOR EXTERIOR AIR ENTRAINED CONCRETE

DESCRIPTION:

SRA-157 EXT is a liquid shrinkage-reducing admixture, which can be used, in any Portland cement-based product to significantly decrease drying shrinkage. **SRA-157 EXT** 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 EXT** 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:

- Can be used in Air Entrained Concrete
- High level of shrinkage reduction that can eliminate cracking due to drying shrinkage in restrained concrete
- Enables production of flatter floors
- Increases spacing between floor joints
- 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 EXT 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.

TECHNICAL NOTE:

SRA-157 EXT 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 EXT** 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. 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.

COMPATIBILITY:

SRA-157 EXT 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 EXT 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 EXT** 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. When adding an air entraining admixture to the concrete it is recommended that the air entraining admixture be added to the truck with the coarse and fine aggregates along with the initial batch water to insure proper generation of a good air void system. **SRA-157 EXT** should be added near the end of the load before the final batch water to be the most effective. Never allow **SRA-157 EXT** to come into contact with dry cementitious material. Trial mixes need to be performed to insure an adequate air void system has been created in concrete subjected to freeze thaw conditions to insure adequate protection against freezing has been achieved.

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 20000 RM** 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 and bulk tank truck.

SHELF LIFE:

18 months

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