

## Product data sheet

# CSA (Expanding agent)

## SECTION 1-Product Introduction

CSA is used in a wide range of applications, such as for reducing dry shrinkage/cracks in mortar finishes and concrete structures, or for chemical pre-stressed concrete products, etc. In addition, a hydration heat control type of expansion material is also available, to which a hydration-controlling agent has been added to prevent thermal cracks.

#### SECTION 2-Features

It expands as a result of needle-like crystals of ettringite being formed, and dry shrinkage decreases.

Long-term strength increases, with improved watertightness.

By restricting the expansion, compressive stress is introduced to the concrete, so that a chemical pre-stressing/pressure effect is obtained.

In hydration control types of expansion material, the expansion energy is sustained even when the temperature falls, thus mitigating the tensile stress resulting from decreased temperature.

In hydration control types of expansion material, the temperature rise in concrete is suppressed.

## SECTION 3-Application

Wall/slab concrete/joint concrete/water bath/underground pit/road paving concrete/reinforcement of steel pipe piles top/lower part concrete when tentative drainage route & horizontal piles are closed/high strength fume pipes (CP)/box culvert (CP)/high strength concrete sheet pile/for lining steel pipes & cast iron pipes/water bath (bottom plate/wall body)/underground structures (pressure resistant plates, underground beams and walls, etc.)/secondary covering work for tunnels/ mortar finish.

#### SECTION 4-Operating Instruction

Dosage The normal dosage of CSA Expansive Agent is 6~8% by the weight of ordinary cement, which is lower compared with other expansive additives such as UEA and CEA (their dosages are about 10~12% by the weight of cement) in the market.

Package & Storage

50kg bags. It is very sensitive to moisture and should be stored in cool, dry conditions.

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