

# DENKA POWER CSA TYPE-S

Shrinkage-Reducing and Compensating Additive

## Description

**DENKA POWER CSA TYPE-S** is a shrinkage-reducing, high-performance expansive additive used in concrete and mortar.

## Features

- Shrinkage compensation (reduces cracking caused by drying shrinkage)
- Increases water-tightness
- Cost-effective

## Applications

- Dry mix mortar
- Ready-mixed concrete

## Packaging

- 20kg paper bags
- 1000kg bulk bags

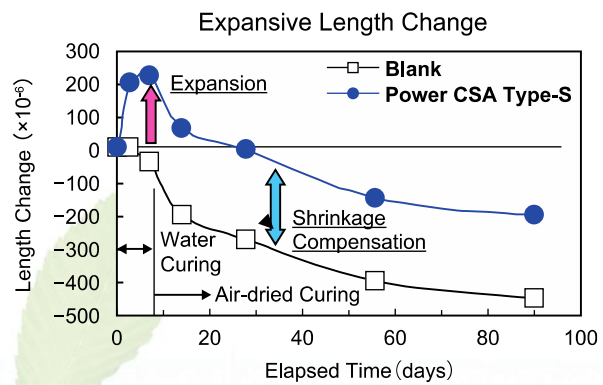
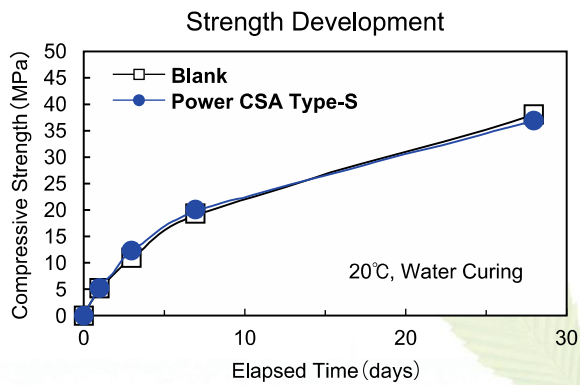
## Shelf Life

- 10 months from production date
- Determine the production date by reference to the lot number. A lot number of "1AXXX" corresponds to production in Jan 2001; "2BXXX" to Feb 2002 and so on.

## Chemical Composition (Typical Values)

SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	SO <sub>3</sub> (%)	Total (%)	f-CaO (%)
1.0	0.8	7.2	70.6	18.5	98.1	49.8

The above may vary depending on equipment, temperature, mixing methods, application methods, test methods, actual site conditions and curing conditions.



#### Concrete Mix Proportion

Ordinary Portland Cement	: 320kg/m <sup>3</sup>
Power CSA Type-S	: 20kg/m <sup>3</sup>
W/(cement+ P-CSA)	: 55.0%
Sand-Aggregate ratio	: 45.5%

## Handling Precautions

- Refer to the Safety Data Sheet (SDS) before use.
- Use a stainless steel or iron agitating blade. Do not use an aluminum blade because hydrogen gas evolution can occur while mixing the mortar; resulting in explosions.
- Mix grout with the specified quantity of water. Using quantities outside the specified range may affect the performance of the non-shrink mortar.
- Use clean water free from oils, salts, or organic compounds.
- Before beginning injection work, optimize water quantity in mixing trials and remove oily residues, laitance, and mud from the surface of structures.
- Wear protective gear (goggles, mask, gloves, and rubber boots) while handling the product. Do not dispose of the product in drains.
- Once opened, the product should be used up completely. Otherwise, reseal for storage.
- The product should be stored in a dry area, indoors, and out of direct sunlight
- For further information, please contact DENKA.

## Limitation of Liability

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- DENKA reserves the right to change the Product Information from time to time at its discretion and without notice.

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