

TETRAGUARD AS21

High performance shrinkage reducing agent

DESCRIPTION

TETRAGUARD AS21 is a ready to use liquid admixture formulated to significantly reduce the drying shrinkage of any concrete.

RECOMMENDED FOR

TETRAGUARD AS21 is recommended for all types of concrete where a reduction in drying shrinkage is required. Examples include:

- Slab-on-ground concrete
- Concrete structures subject to marine and/or chemical environments
- Industrial pavements
- Pre-stressed elements
- Tunnel linings
- Bridge girders
- Watertight and water retaining structures
- Concrete pipes
- Manufactured concrete products

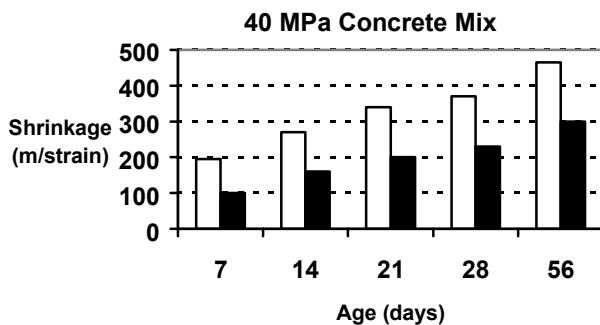
FEATURES AND BENEFITS

Pore water capillary tension is the major contributor to the drying shrinkage of concrete. **TETRAGUARD AS21** reduces the drying shrinkage of concrete by reducing the capillary tension of the pore water in concrete. Reductions in drying shrinkage of up to 50% have been obtained using **TETRAGUARD AS21**.

The benefits derived from the reduction in drying shrinkage include:

- Dramatic reduction in crack occurrence caused by drying shrinkage
- Increased joint spacing in concrete pavements and slab-on-ground
- Improved concrete durability
- Longer service life

PERFORMANCE DATA



□ Rheobuild 1000

■ Rheobuild 1000 + Tetraguard AS21

APPLICATION

Mixing

TETRAGUARD AS21 can be added during the batching process or on site. It is recommended that when added during the batching process, **TETRAGUARD AS21** is added to the initial batch water (as per a normal water reducer) to ensure complete distribution throughout the mix. When added on site, high speed agitation for 2 to 3 minutes is required to ensure complete distribution of the **TETRAGUARD AS21** throughout the mix.

The recommended dose rate of **TETRAGUARD AS21** is 2 to 8 litres per cubic metre.

Mix Adjustment

The **TETRAGUARD AS21** dosage must be considered as part of the unit water content of the mix design. A reduction of 2 to 8 litres per cubic metre of water is therefore recommended when batching the concrete.

Compatibility

TETRAGUARD AS21 can be used with other BASF admixtures to achieve cost effective customised performance. However, all admixtures should be dispensed separately and added separately to initial batching water to ensure complete distribution throughout the mix. **TETRAGUARD AS21** should not be used in conjunction with other admixtures unless specific test information is available.

PACKAGING

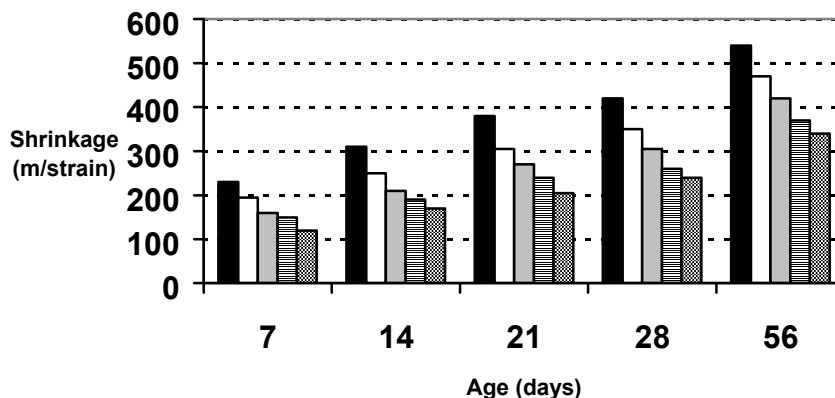
TETRAGUARD AS21 is supplied in bulk, 1000 litre Pallecons, 205 litre plastic drums and 20 litre cubes.

SHELF LIFE

TETRAGUARD AS21 should be stored out of direct sunlight. If kept in a dry place in tightly closed original packing it has an 12 month shelf life.

TETRAGUARD AS21

40 MPa Concrete Mix



- 0L/m3 Plain Mix □ 2L/m3 Tetraguard AS21
- ▒ 4L/m3 Tetraguard AS21 ▓ 6L/m3 Tetraguard AS21
- ▔ 8L/m3 Tetraguard AS21

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF**, are responsible for carrying out procedures appropriate to a specific application.

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