



## Product information

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### Newchem AS-28

#### Expansive additive for reduced shrinkage of cementitious binders

#### Description

Newchem AS-28 is an aluminate & sulphate-based compound designed as an expansive agent for concrete & mortars. This expansion helps to reduce the hydraulic shrinkage of cement-based construction products.

In Europe this technology has been used successfully for over 40 years to reduce shrinkage and cracks. Newchem AS-28 is a strong expansion additive with most cements. Its efficiency may vary depending on the cement type.

Depending on the Portland cement used, Newchem AS-28 may also lead to a reduction in setting time. It also usually improves mechanical performances of the mortar / concrete at all ages.

#### Physical properties (approx.)

Appearance:	off-white, easy handling and flowing powder
Aerated density:	880 kg/m <sup>3</sup> (+/- 50kg/m <sup>3</sup> )
Bulk density:	1020 kg/m <sup>3</sup> (+/- 50kg/m <sup>3</sup> )
Specific density:	2700 kg/m <sup>3</sup> (+/- 100kg/m <sup>3</sup> )
Particle size distribution:	D <sub>10</sub> 2 - 4 µm D <sub>50</sub> 8 - 12 µm D <sub>90</sub> 25 - 35 µm

#### Function

The mineral parts of Newchem AS-28 react with water producing fine needles of ettringite, giving a volume increase (expansion). This early age expansion generates a pre-stress that will counteract the chemical shrinkage due to hydration and the drying shrinkage of the mortar. If dosed properly, the total shrinkage between setting and 28d can be brought down to zero.

#### Advantages

Depending on the addition level:

- Reduced shrinkage
- Possible setting acceleration
- Higher early strength & 28 days strength



## Applications

Newchem AS-28 can be used in a variety of applications, such as:

- Repair mortars
- Self-levelling compounds such as self-levelling screeds
- Surface coating mortars for concrete
- Industrial flooring
- High density mortars and concrete

## Addition level

Typical addition levels are 4 - 10% of the cement by weight. Expansion and reduced shrinkage are proportional to the addition level. It is highly recommended that laboratory trials should first be carried out to determine the correct addition level of Newchem AS-28.

Too high an addition level of Newchem AS-28 will result in extremely strong expansion and possible with reduced strength. Overdosage can be easily determined by putting the samples underwater after 7 days. If swelling is higher than that of the control sample, this means that Newchem AS-28 has been overdosed.

## Compatibility

Newchem AS-28 is compatible with Portland cement and hydraulic binders, including ground blast furnace slag, fly ash and hydrated lime.

## Health & Safety

Although Newchem AS-28 is slightly less alkaline than Portland cement, we recommend it be handled like other cements. Avoid contact with skin or eyes and wear protective gloves and goggles. In case of contact with eye flush immediately with plenty of water. Refer to Material Safety Data Sheet for full details.

## Storage

Newchem AS-28 is very sensitive to moisture and should be stored in cool, dry conditions.

## Packaging

Packed in bags of 25 kg or in big bags of 1000kg.

The above information and recommendations are based upon our experience and are offered merely for advice. They do not absolve the consumer from making his own tests. Responsibility for damage arising from the use of our products cannot be derived from the recommendations given. The observance of any intellectual property rights of third parties is the responsibility of the consumer in each case.

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