

# UNDERTON AL X

## Liquid shotcrete accelerating admixture

### DESCRIPTION

UNDERTON AL X is a liquid accelerator for the wet spray shotcrete process.

### USES

- Shotcrete with high initial strengths
- Heading stabilisation in tunnelling
- Rock and slope stabilisation
- Underground linings (i.e. in tunnels)
- To form permanent gunite or shotcrete shells

### CHARACTERISTICS

The accelerator's effect of UNDERTON AL X is dependent on the cement content, type and age, substrate temperature and type, hotcrete temperature, layer thickness and spray process / equipment

The following properties distinguish UNDERTON AL X:

- Exceptional early strength development
- Low rebound
- Improves the bond of the shotcrete to rock and concrete, making overhead spraying easier
- Chloride free

### FIELD OF APPLICATION

- The correct dosage must be determined by preliminary testing.
- For layer thicknesses of up to about 20 cm in one pass, dosage is between 3% and 7% by weight of binder.

### STANDARDS

ASTM C 1141 Type II  
TS EN 934-5 Chart 2

### PRODUCT DATA

Chemical Base: Special inorganic blend of materials.

Density: 1.48 ± 0,02 Kg/L (20 °C)

Alkali Content : ≤ %20 (TS EN 480-12)

### STORAGE CONDITIONS AND PACKAGING

- UNDERTON AL X must be stored in its original containers.
- UNDERTON AL X has a reaction in air with atmospheric humidity [moisture] or rain etc., and must therefore always be stored in sealed containers.
- Do not store in aluminium tanks.
- The storage temperature must be above +5 °C.
- 3 months from date of production if stored in undamaged and unopened, original sealed containers.
- Once containers are opened, use the material as quickly as possible.

### COMPATIBILITY

UNDERTON AL X is not compatible with Superton and Politon Series of Polisan Chemical Admixtures

UNDERTON AL X can be used with all types of cement according to TS EN 197-1 standard. It is recommended to apply to the technical support of Polisan Kimya for use in special cement types.

### SAFETY INFORMATION

UNDERTON AL X is corrosive and provokes burns and serious damage to the eyes. Always wear suitable protective gloves, goggles and clothing. If the product comes into contact with the skin or eyes, rinse immediately with water and seek medical advice.

For more detailed information, please refer to the material safety data sheet (MSDS) of the product.