

# NOVACAST ACE 50

## Liquid Set Accelerating and Shotcreting Admixture

### Description

**Novacast ACE 50** is a liquid, rapid set accelerator for use in sprayed concrete and gunite. **Novacast ACE 50** enables spraying of concrete or mortar even on a wet surface, allows overhead spraying and reduces rebound. **Novacast ACE 50** is eco-friendly.

### Domains of Application

- ✓ Tunnels & mining
- ✓ Parking decks
- ✓ Bridges structures
- ✓ Pier and dock support
- ✓ Marine environments
- ✓ Dams
- ✓ Retaining walls
- ✓ Manholes
- ✓ Guniting projects

### Advantages

- ✓ Enables quick setting action and subsequent multi-coat applications
- ✓ Reduced rebound and wastage
- ✓ Helps protect rebar from corrosion
- ✓ Low shrinkage properties
- ✓ Easy overhead guniting
- ✓ Improved water tightness & reduced permeability
- ✓ Economical in use

### Technical Properties

|                      |                                |          |
|----------------------|--------------------------------|----------|
| Appearance           | Clear liquid                   |          |
| Compressive Strength | 8 hours                        | > 5 MPa  |
|                      | 1 day                          | > 14 MPa |
|                      | 3 days                         | > 23 MPa |
| Setting Time         | Initial                        | 3 to 4   |
|                      | Final                          | 10 to 12 |
| pH                   | 10 to 11                       |          |
| Chloride content     | Nil<br>(As per BS 5075-Part 1) |          |

### Standard Compliance

**Novacast ACE 50** conforms to specification prescribed in ASTM C - 1141 Type II Grade I Class A.

### Compatibility with Cement

**Novacast ACE 50** is suitable for use with all types of Portland cement. For use with special cements, we recommend that you consult CCI Chemicals.

**With other admixtures:** **Novacast ACE 50** should not be premixed with other admixtures. The performance of the material may be affected by the presence of other chemicals, and we would recommend that CCI Chemicals be consulted in such circumstances.

### Instructions for use

#### Surface Preparation

The concrete to be shotcreted must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a bush hammer, sandblaster or jackhammer which will give a surface profile of a minimum 1/8" (3 mm) and expose the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all residues with a vacuum cleaner or pressure washing. No bond coat is required for this product.

#### Application

For application, set up wet shotcreting equipment in an area convenient to the placement site. Add **Novacast ACE 50** directly to the liquid & charge directly to the gun near the tip of the shotcreting nozzle. Skilled nozzle operation and thorough mixing within the concrete are essential. The concrete workability must be adjusted to suit the spray equipment, its capacity, temperature and other local conditions.

#### Dosage

The optimum dosage for **Novacast ACE 50** can only be established after trials, considering the physical characteristics and the required mechanical properties. The dosage range will generally be in the range of 3% to 12% by weight of cementitious material.

## Overdosing

Overdosing of **Novacast ACE 50** will produce very fast setting of cementitious mixes, and low compressive strength, but will not adversely affect other properties.

## Packaging

200 kg and 20 kg HDPE containers.

## Storage & Shelf life

If stored in a cool, dry place away from heat, it has a shelf life of approximately 12 months.

## Precautions

- ✓ In adverse temperatures, follow ACI recommendations for hot/cold weather concreting practices.
- ✓ Minimum application thickness 1.3 mm
- ✓ For optimum results, condition material to 18°C to 29°C
- ✓ Store product in dry place.
- ✓ Clean tools and equipment with water before the material hardens

## Safety

- ✓ Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- ✓ In case eyes or mouth are affected, wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet (MSDS). The MSDS is available on [www.ccichemicals.in](http://www.ccichemicals.in) or contact us at [info@ccichemicals.in](mailto:info@ccichemicals.in).

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