



# ROC HP

## MICRO SILICA BASED ADDITIVE

### PRODUCT DESCRIPTION

**Roc HP is a mass additive that allows fabricating concrete for high performance slabs with exceptional durability :**

- Concrete slabs for the food industry.
- Concrete slabs for rapid commissioning.
- Concrete slabs for aggressive environments.
- Slabs facing high dynamic stresses.

Qualities of a high performance slab:

- High mechanical strength at short term: about 40 MPa at 2 days and 20 °C
- An excellent compressive strength: > 60 MPa at 28 days.
- Improved ductility and response to stress in the case of a concrete-steel composite.
- Very low permeability to water.
- Excellent resistance to chemical aggressions.
- Improved behaviour in cracking.
- Better résistance to abrasion.

### CONSUMPTION

**Roc HP** is used normally at the rate of 15 to 30 kg/m<sup>3</sup> of concrete.

### APPLICATION

The beneficial effects of **Roc HP** are possible provided a minimum dosage of 350 kg/m<sup>3</sup> is respected with a suitable granular composition and a W/C ratio of 0.45. **Roc HP** should be preferably mixed dry with other constituents before the introduction of mixing water. After adding water, a mixing of at least 1 mn 30 s is necessary for allowing a uniform mixing of the different constituents. If a proportionating unit is used, the totality of **Roc HP** should be introduced in the mixing truck along with a part of the mixing water. Mix for one minute and add the aggregates and the remaining portion of water as usual. Mix until a material of homogenous consistency is obtained.

### TECHNICAL SPECIFICATIONS

- **Roc HP** is composed of micro silica and special additives. It is highly recommended to use Portland cements CPA-CEM I 52.5 PM or PM ES, whose minimum dosage should be 350 kg/m<sup>3</sup>.
- **Roc HP** allows the fabrication of slabs highly cohesive in fresh condition; this is an advantage for casting fluid concrete without segregation.
- **Roc HP** increases the compactness of hardened concrete through pouzzolanic reactivity. The concrete produced has very low permeability to liquids and gases. It allows obtaining concrete with high mechanical strength.

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- **Roc HP** contains necessary additives for an easy application of concrete.

**We recommend against the use of supplementary additives.**

### INSTRUCTION OF USE

#### Concrete used in aggressive environments

**Roc HP** brings exceptional durability in many aggressive environments.

- Agricultural sector: silaging, storage of fertilizers
- Industrial sector: chemical and food industries
- Service Stations: oil, fuel...
- Concrete in the presence of aggressive water: marine, environment, mountain concrete facing pure water and de-icing salts used on roads.

#### Alkali-reaction

The addition of micro silica reduces significantly the inherent risk of concrete expansion due to alkali-reaction. **Roc HP** prevents this reaction.

#### High performance concrete

The addition of **Roc HP** allows increasing the mechanical strength in compression, traction and modulus of elasticity. Long-term shrinking and creep in high-strength concrete are much lower than in the case of a traditional concrete.

### PACKAGING

- 20 kg kit The product can be stored during one year in its original packing, in a closed room sheltered from humidity and frost.

### HEALTH AND SAFETY

Product not regulated, not dangerous.

Consult our safety datasheet.

#### Legal note:

Owing to the different materials, substrates and differing working conditions, no guarantee in terms of result or adhesion for whatever reason and/or legal nature can be assumed by RCR Production France. Please note, the documentation of this technical data sheet can vary depending of the respective country. Note the abroad relevant product data sheet. For the rest, the most recent general terms of business of RCR Production France can be requested from us or viewed, in their most recent version, at [www.rocland.eu](http://www.rocland.eu) and printed out.

We reserve the right to make changes to the product specifications.