



ROCLAND

Roc Fluid Plasticizer for concrete

Description

Roc fluid, synthetic product, is a powerful plasticizer that improves the placing of concrete while reducing the quantity of water required for mixing and increasing the mechanical strength. Following are the advantages offered by the physico-chemical action of **Roc fluid** :

1. In fresh concrete :

- Considerable increase in the fluidity of concrete facilitating its workability
- Improving the ability to pump concrete

On hardened concrete :

- Increased mechanical strength
- Greater compactness.

2. In cured concrete :

- Energy saving (heating, vibrations, equipment)
- Improve the rotation of formwork.

Roc fluid is compatible with all types of cements with the exception aluminous binders.

Physical properties

Appearance :	dark brown liquid
Density :	1,20 ± 0,01
Viscosity at 20 °C :	32 mPa.s ± 0,01
Complying with standard :	NF EN 934.2
Chlorine Content :	< 0,1 %

Packaging

- Jerry can of 10 l (12 kg)
- Drum of 200 l (240 kg)
- Container of 1000 l (1200 kg)

The product can be stored during three years in its original packing, in a closed room protected from humidity and frost. In case of extended frost, check that the product has not become unstable.

Mise en œuvre

Roc fluid is used at the rate of 0.6 to 1.5% of the weight of cement, depending on its domain of application, the category of cement used and the climatic conditions. Depending on the production site of concrete, we recommend the following uses :

- **Worksites and prefabrications:** **Roc fluid** should be added at the beginning of last third of mixing time after the end of introduction of mixing water.
- **Premixed concrete:** **Roc fluid** is added to the concrete in the mixer truck, at the worksite. Mix at high speed during minimum one minute per m³ of concrete.
- **Fibre concrete:** Consult the technical datasheets of processes: **Proroc NT - Roc fibres - ROC fibres HT...**

Please note the following points:

- Period of efficacy in the range of half an hour at 25°C. For the same dosage, the effect will be greater in winter and lesser in summer.
- Do not add water to the fluidised concrete. If required, a dose of Roc fluid may be added.
- An excess of fluidification may lead to delayed setting of concrete.

Note :

All types of concrete cannot be fluidised. Concrete to be fluidised should contain a sufficient level of fine elements. The addition of 5% of very fine sand (less than 0.3 mm) to a concrete of ordinary quality makes it fluidisable. Generally, the dosage (cement + fine sand) is in the range of 450 kg/m³ of concrete when the diameter of largest aggregates does not exceed 20 to 25 mm.

Consumption

Recommended range of usage: 0.6 to 1.5% of the weight of cement or 0.5 to 1.25 litres for 100 kg of cement.

Health and safety

Product non-regulated, not dangerous.

Consult our safety datasheet

Roc Fluid

Instructions for use, dosage

Roc fluid offers two particular advantages:

Easy handling

Property of converting a firm or plastic concrete (cone 3 to 7 cm) into fluid or very fluid concrete (cone from 15 to 20 cm) while preserving its strength. The concrete is placed very easily with a light vibration. Careful rodding is necessary if you are not vibrating.

Roc fluid is recommended in this case for concrete with very dense armature:

- Building: floors, beams, pillars, panels, slabs
- Civil engineering: structures, tanks.

Strength

Improvement of strength and ease in handling with reduction of partial water (5 to 10 %) and a dosage in **Roc fluid** of 0.6 to 5 % of the weight of cement. **Roc fluid** also allows improving the placing of concrete by increasing the strength at the same time (15 to 40 %) through the association of these two effects.

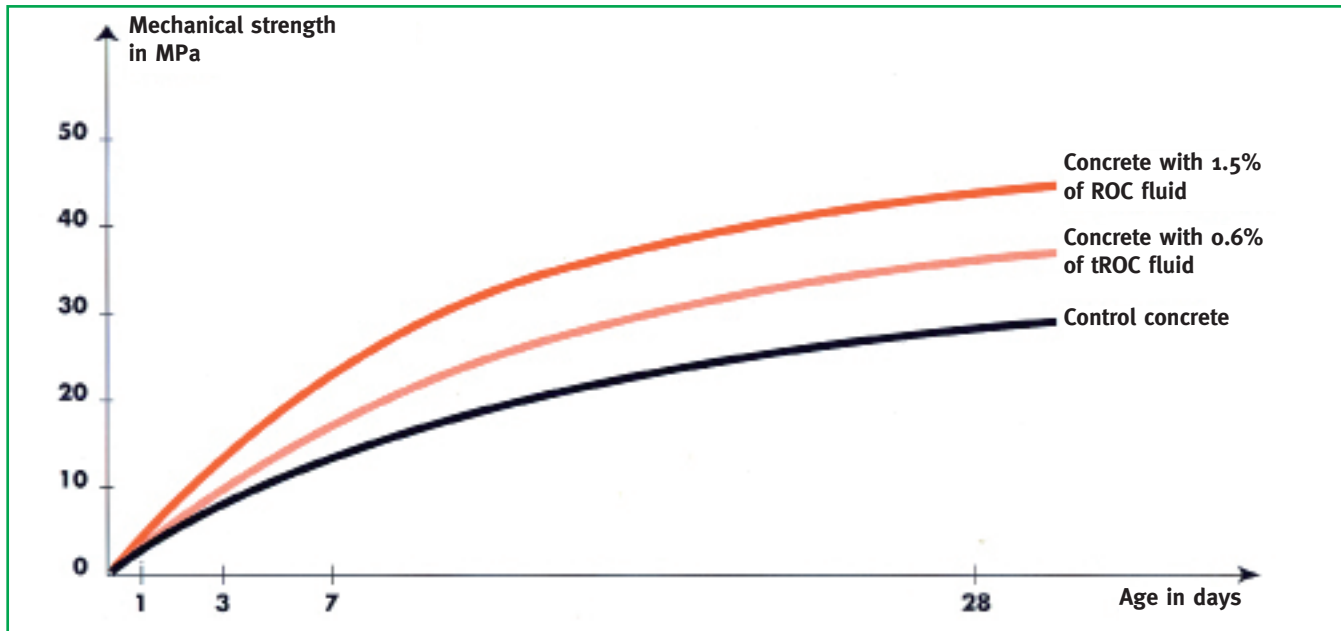
Roc fluid fluid is used in these two cases for:

- Reinforced concrete, all performances
- Prefabricated concretes (cured or not)
- Fibrous concrete.

Comparative values obtained for a concrete of type CPA-CEM I (350 kg/m³) W/C = 0.5

Roc fluid	Water l/m ³	Cone cm	Compressive strength MPa		Traction strength MPa	
Control	175	7	10,0	43,0	0,8	2,6
0,6 %	175	14	10,5	44,0	0,8	2,6
0,75 %	175	16	12,0	45,0	0,9	2,7
1,5 %	175	18	13,0	45,5	0,9	2,7

Mechanical strength of a concrete with a dose of 350 kg of CPJ (cone = 11 cm) by addition of Roc fluid



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Note :

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