

# Donplast AF1

Alkali-free sprayed concrete accelerator (Formerly known as Flocrete AF1)



## Description

Donplast AF1 is a set accelerating, alkaline and chloride free admixture used for sprayed concrete, shotcrete and gunite processes.

## Applications

Donplast AF1 is suitable for several wet and dry shotcrete applications such as:

- ▲ Inner lining.
- ▲ Initial and permanent support of surfaces in underground spaces.
- ▲ Slope and rock stabilization.
- ▲ Repair and renovation work.

## Advantages

- ▲ Rapid setting; allows thick sections to be built-up.
- ▲ Alkaline free.
- ▲ Minimum rebound.
- ▲ Single-pass spraying for thick layers.
- ▲ Excellent for overhead applications.
- ▲ Can be used for 'wet and dry' processes.

## Compatibility

Donplast AF1 is suitable to use with all types of Portland cement and cement replacement materials. Donplast AF1 is compatible with other DCP admixtures when used in the same concrete mix.

If more than one type of admixture is to be used, they must be dispensed into the mix separately.

## Standards

Donplast AF1 complies with ASTM C1141, as Type I and II, Grade 9.

## Method of Use

Stiffening occurs approximately after 10 seconds of mixing concrete with Donplast AF1. As with all other processes and products, the rapid initial acceleration of the cement hydration process affects the ultimate concrete strength.

## Technical Properties @ 77°F (25°C):

Colour:	Clear yellowish liquid
Specific gravity:	1.40 ± 0.05
pH:	2 - 5
Chloride content:	Chloride-free
Setting time @ maximum dosage: ASTM C1398	
Initial	≤ 3 min
Final	≤ 12 min

## Dispensing and Mixing

Donplast AF1 is typically introduced directly after the air ring in the spray nozzle. In order to obtain a consistent supply of admixture at the nozzle, the delivery system should have an 87 psi pressure pot (600 KPa), and a 3/4" (19 mm) inside diameter pressure delivery hose controlled by a pressure restrictor and tap.

With the 'wet process', the use of a water-reducing admixture to reduce the water content while increasing the workability of the mix is recommended.

## Dosage

The optimum dosage for Donplast AF1 to meet specific requirements should be determined by trials using the materials and conditions experienced in actual use, and this will determine the optimum dosage to be used and ensure the most cost effective site application.

The typical dosage range for Donplast AF1 is 77 to 108 fl oz/100 lb (5,005 to 7,020 ml/100 kg) of cementitious and cement replacement material by weight, including PFA, GGBFS or micro-silica.

## Use at Other Dosages

Dosages outside the typical range mentioned above may be used if necessary to meet particular mix requirements. Compliance with requirements must be assessed through trial mixes. For further information and support, contact DCP's Technical Department

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## Effects of Over Dosage

An overdose of the intended amount of Donplast AF1 will result in the reduction of the setting of the mix and will result in some loss of strength.

## Cleaning

Clean Donplast AF1 with fresh cold water.

## Packaging

Donplast AF1 is available in 5 gal (19 litre) containers as well as 275 gal (1,041 litre) and 330 gal (1,249 litre) IBC totes. Bulk supply in tanker trucks is also available upon request.

## Storage

Donplast AF1 has a shelf life of 3 months from date of manufacture if stored in a dry area out of direct sunlight and exposure to frost in its original unopened container at temperatures between 41°F and 95°F (5°C and 35°C).

Material needs thorough mixing before usage, and for bulk storage, site agitation or recycling pumps is a must.

If these conditions are exceeded, contact DCP Technical Department for advice.

## Cautions

## Health and Safety

Donplast AF1 is not classified as a hazardous material. Donplast AF1 should not come into contact with skin and eyes. Goggles and gloves should be used. In case of contact with eyes, immediately flush with plenty of water and seek medical attention.

For further information, refer to the Material Safety Data Sheet

## Fire

Donplast AF1 is nonflammable.

## More from Don Construction Products

A wide range of construction chemical products are manufactured by DCP which include:

- ▲ Concrete admixtures.
- ▲ Surface treatments
- ▲ Grouts and anchors.
- ▲ Concrete repair.
- ▲ Flooring systems.
- ▲ Protective coatings.
- ▲ Sealants.
- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.

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### Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

