



# FLOBOND™

## Composition

FLOBOND™ is a range of organic soil conditioners based on polyacrylamide (PAM). These are water-soluble anionic polymers of high molecular mass.

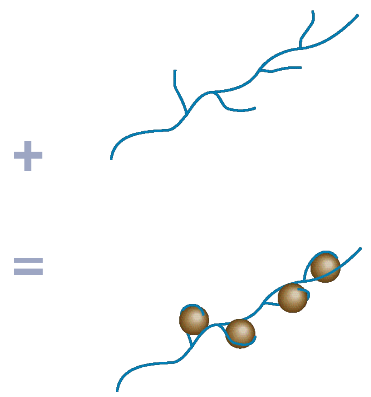
FLOBOND™ products make it possible to reduce the soil erosion caused by surface

water runoff and to enhance the permeability of the soil.

## Mode of action

FLOBOND™ enables the agglomeration of the fine particles of soil which would otherwise be carried away by surface water runoff.

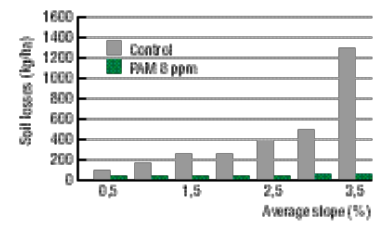
When the PAM dissolves in water, dissociation of the potassium ion exposes a negative site on



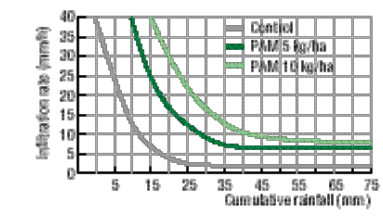
## General recommendations for use

FLOBOND™, in powder or tablet form is dissolved in the irrigation water.	1 to 2 kg/ha. The product is diluted in the irrigation water.	At the first irrigation after sowing, then every other irrigation. The product is dissolved in the irrigation water until the water reaches the field outlet. Reapplication is required each time the soil is surface-worked.	PAMMETER: 12-volt battery electrical distributor. Mechanical belt distributor.
FLOBOND™ is injected in emulsion form into any sprinkler irrigation system (pivots, winders, etc.)	3 to 6 l/ha or more in the case of a highly erosion-sensitive soil (with very weak structure, slope greater than 3.5%, etc). The product is injected into the pipes.	Metering pump. Anturi system.	No equipment required if the tablet is placed at the beginning of the furrow. In a «fisherman's» basket immersed in the irrigation channel.
FLOBOND™ is broadcast in powder form.	5 to 10 kg/ha. The dry product is broadcast onto freshly worked soil.	Either at the time of sowing, with a low-volume spreader, or just after sowing, mixed with a fertiliser.	An «anti-slug distributor» apparatus mounted on a Quad or on a seed drill. Applied locally to the seed row, using a seed drill equipped with a microgranulator.

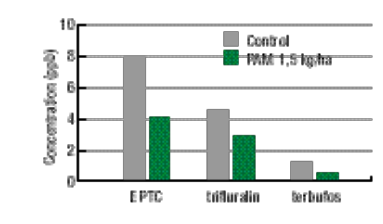
Soil losses by irrigation as a function of terrain slope



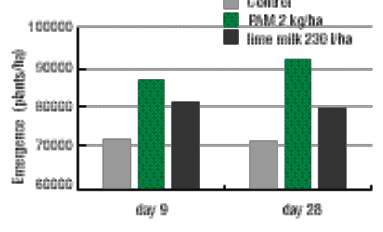
Rate of infiltration of loamy soil as a function of cumulative rainfall



Concentration of various pesticides in the runoff water at the field outlet



Emergence of beet plants from a soil sensitive to crusting



the molecule at which the colloidal soil particles will be attached (the ratio n/m ranges from 0 to 100 and indicates the anionicity of the PAM).

## Advantages of FLOBOND™

- FLOBOND™ increases the cohesion of poorly structured soils, so that less sediment is entrained by water runoff. The result: an average reduction of 95% in erosion.
- The porosity of the soil is also conserved, so maintaining excellent infiltration of the soil by water (+ 35% on clay-loam soils to +50% on clay soils)
- FLOBOND™ also considerably reduces the leaching of nutrients (e.g.: 84% less for phosphates and nitrates) and pesticides in the runoff waters (e.g. atrazine, trifluralin).
- FLOBOND™ brings about an improvement in germination rate by up to +35% for plants sensitive to soil crusting (e.g.: beet and vegetable crops).

## Directions for use

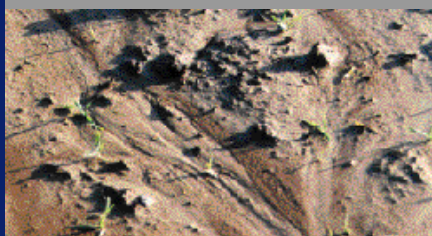
- Slowly pour the product into the irrigation water. Gentle stirring prevents the particles agglomerating.
- The greater the temperature of the water, the faster the product will dissolve.
- All products in the FLOBOND™ range are of very high viscosity in water. If the product is spilt, pick up the product with a shovel or by suction. After cleaning, flush away any traces with water.

- Pressurise the system before injection.
- A non-return valve is required on the injection system.

- To clean equipment, blow away powder traces with compressed air. On equipment where

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*controlling water  
in agriculture*



FLOBOND™ has been used in solution, rinse with bleach.

- Avoid contact with the skin and eyes (the use of gloves and goggles is recommended).
- For powders it is recommended to wear an anti-dust mask.
- For further information, consult the material safety data sheets (MSDS).

## Environment

- FLOBOND™ breaks down naturally in soils under the action of UV and microbiological attack to form CO<sub>2</sub>, H<sub>2</sub>O and nitrates of ammonium. The nitrogen group of the molecule is consumed rapidly by soil bacteria. The carbon group breaks down by approximately 10-15% per annum depending on UV intensity.
- No toxicity has been found in water and soil. The product is approved in the USA (FDA) and by the Ministère de la Santé (French Ministry of Health) as a water treatment additive.
- The concentration of the product in the runoff waters is zero 30 minutes after the end of application.
- The duration of field efficacy of FLOBOND™ varies from 4 to 8 weeks depending on the agro-climatic conditions.

## Packaging and storage care

The products of the FLOBOND™ range are available in various forms: powder, emulsion

