### TABLET TECHNOLOGY

Ready-to-use polymers for the water treatment industry





## TABLET TECHNOLOGY: Ready-to-use

SNF Floerger has 25 years of experience in the production of water-soluble polymers, mainly organic flocculants and coagulants used in the water and wastewater treatment. Throughout these years, sustained industrial investments have brought SNF to become the first world manufacturer of polyacrylamide based-polymers. We offer the largest range of products on the market with powders, beads, emulsions, and liquids...

SNF benefits from economies of scale through vertical integration in basic monomers that leads to unique cost-effectiveness. Our major production units are located in France (Andrézieux), the USA (Savannah, Ga), China (Taixing, Jiangsu), Korea (Ulsan).

Thanks to its unique polymerisation capabilities and experience, SNF is always innovating and can now supply its flocculant polymers under a new and unique physical form on the market: Tablets.

Tablets will considerably enhance the range of action of polymers thanks to the various advantages they will provide to end-users :

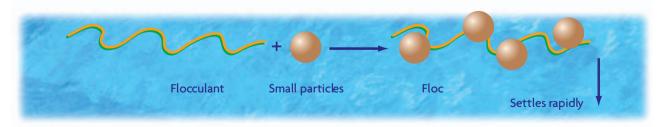
### How does it works?

Flocculants are long chain polymers of high molecular weight and with a charge content (anionic or cationic). They fix the destabilized particles and aggregates along the polymer chain thus increasing the size of the particles present in the water resul-

- Easiness and flexibility of use,
- Accuracy of prescribed amount,
- Simple dosage equipment,
- Easiness of storage,
- Cost-effectiveness.



ting in the formation of flocs. These flocs then drop quickly to the bottom for easy separation. A flocculant in a tablet form will dissolve progressively according to the wastewater to treat.



Flocculation of small particles

# polymers for the water treatment industry

### Applications:

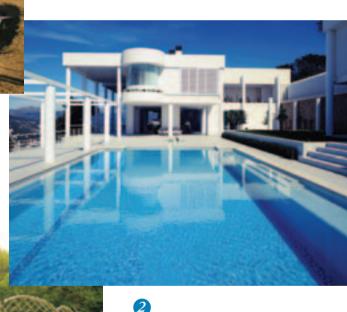
The tablet's concept has been developed by the pharmaceutical industry and then adopted by the detergence and hygiene industries. For the purpose of water treatment operations, SNF has developed four standard grades of tablets:

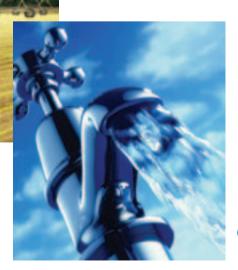
- Water treatment of ponds, reservoirs and lagoons > The FLOPAM T series,
- Water clarification of swimming pools > The FLOQUAT T series,
- 3 Soil conditioners used in irrigated agriculture for

erosion control and water infiltration >

- 4 The FLOBOND T series
- Drinking water tablet > developing stage







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### Tailor-made tablets and toll manufacturing capabilities

Thanks to its strong expertise in polymerisation and a good knowledge in tablet manufacturing, SNF is able to develop specific grades for each and every customers.

SNF is the lowest-cost water-soluble polymer producer in the World. Cost effectiveness is SNF's main strength.

SNF can adjust the performance and characteristics of the tablets by varying:

- The nature of polymers (anionic, cationic, etc....)
- The ionic charge;
- The molecular weight;
- The dissolution time,
- The addition of one or two other active ingredients to design all-in-one tablets.

SNF has fully equipped a laboratory with a tablet machine that contributes to faster developments of new formulated tablets.



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### Field of applications:

#### Agriculture

The FLOBOND<sup>™</sup> T series: Tablets designed specifically for soil stabilization in irrigated agriculture

**Flobond Tablets** have been designed for use in soil erosion control and water infiltration applications on sprinkler and surface irrigated crops. This is achieved through the flocculation of unstable fine soil particles.

In surface irrigated agriculture, Flobond Tablets can be placed either in a mesh bag suspended

directly into the main irrigation channel or directly onto the ground at the beginning of the furrow.

In sprinkling irrigation, Flobond Tablets are used to reduce problems with rutting in the wheel tracks of centre pivots and linear move irrigation equipment. The appropriate number of tablets will be placed in a mesh bag or stainless box and directly secure in the path of water flowing from each tower into the wheel track (suspending bags or boxes from basebeam centre drive motor mount is recommended).



#### Special instruction :

• Flobond Tablets should be applied just after planting time or other soil disturbance but prior to irrigation or rainfall. Do not water prior to product application as soil structure will begin to breakdown. If crust has formed as a result of previous irrigation or rain, the product will not restore soil structure. • Application rates will vary according to type of water, water flow, water temperature, soil type, slope and other soil and environmental conditions. Rate adjustments can be made during irrigation based on observed results.

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#### Swimming pools

### The FLOQUAT<sup>™</sup> T series: Tablets for water clarification of swimming pools

Floquat in tablet form is a flocculant highly effective to restore clarity in swimming pools. The product removes cloudy conditions and haze by flocculating small sized particles such as silica, algae and carbonates. These flocs then quickly drop to the bottom of the pool for easy vacuuming. They are placed directly into skimmers.

- Very effective on hazy and green water, especially as shock treatments;
- Easy to use and no risk of overdosing;
- All suspended particles settle within a day.



#### Water reservoirs <u>&</u> ponds

# The FLOPAM<sup>™</sup> T series : Tablets for water treatment of ponds, reservoirs and lagoons...

FLOPAM<sup>™</sup> tablets are also designed for all types of ponds, water reservoirs and lagoons to obtain clear water and avoid hazy conditions due to suspended soil particles (silica, clay), dead algae or carbonates. By placing the tablets in a mesh bag or box just into the inflowing water, suspended soil particles will settle rapidly to the bottom of the pond thus resulting in clear waters.



#### Drinking water

#### The FLOPAM<sup>™</sup> T series : Tablets for smallscale drinking water plants

This tablet is still in the development stage. This new product will be designed to produce drinking water directly from pumped water in a river or a water hole. The tablet will be used in small scale drinking plants requiring low investment. The idea is to produce safe drinking water for remote locations by using very economical dissolution equipment



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### Handling and Safety considerations:

#### Handling

 Polymer tablets are efficient only if correctly dissolved in water. It is important to place them under an adequate water flow.

As all the organic flocculants, the tablets will become extremely viscous once they go into solution.
If the product is spilled, be sure not to rinse it with water or it will become extremely slippery. Shovel or vacuum it up.

• To clean equipment, blow off the traces with compressed air.

#### Safety

 Tablets require proper handling by trained personnel. Serious damage to health can be caused through prolonged exposure by ingestion, inhalation and contact with skin. Only properly informed, trained and equipped staff should be involved in storage, loading and unloading, or the application of the products.

• Complete and up-to-date information on the toxicology and environmental safety of the tablets can be found in the Material Safety Data Sheet, which is supplied with the products. Further information is available from our product information and Regulatory Affairs Department.

• If the instructions of use are correctly followed, the final polymer does not constitute a risk to human health or the environment.

### Packaging:

Flocculant tablets are lightly hygroscopic therefore it is important to keep them in their original boxes and plastic liners when not in use. Store in a cool dry well ventilated area away from heat. An optimum storage temperature is comprised between 0 to 35°C.

When stored inside a building at a stable temperature between  $5^{\circ}$  and  $30^{\circ}$ C, shelf life is 12 months.

The packing sizes are specified in the Technical Data Sheet of each product.





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