

DIRECTIONS FOR USE OF COAGULANT (PNS)

Coagulant is a powder to which water must be added in order to prepare a viscous substance which is capable of radically altering the nature of the paper pulp with which it is used.

Preparation

The powder should be mixed with cold water in the following proportion:

1 gram powder to 1 liter of water

or

1/2 teaspoon powder to 1 quart water

Place an empty container under the water faucet, out of which a slow, steady stream of water should be flowing. Slowly add the powder with one hand, mixing constantly and thoroughly with your other hand. If there are lumps, then you are probably adding the coagulant too quickly. Let the solution sit for several hours before using it, stirring occasionally. This ensures that the powder has been completely dissolved.

A more concentrated solution may be made by increasing the proportion of powder mentioned above. This may be stored for future use, as it will last for many months.

The dry powder has a fairly indefinite shelf life, provided it is stored in an airtight container, in a dry place.

Use of the Coagulant

When the coagulant is mixed with pulp that already contains either Carriage House Retention Agent or Sizing, the pulp will **flocculate**, that is, coagulate and form clumps. This phenomenon can be used to create some very special effects, and is particularly effective with luster pigments or the regular type of Aardvark pigments. The flocculated pulp can be left in its clumpy stage, or the clumps made smaller by dispersing the pulp in more water by hand, or a blender can be used to further separate the clumped fibers. In any case, the flocculant keeps the pulped fibers distinct from other pulps, and maintains the integrity of individually colored pulps in the papermaking vat. Important: The coagulant depends upon its use with either the retention agent or sizing - the reaction only occurs when a few drops of the viscous coagulant is added to pulp that contains retention agent or sizing. **Only a little** of the coagulant is needed for this reaction.

Alternatively, when the coagulant is mixed with pulp that contains **neither** retention agent **nor** sizing, the pulp will not flocculate. When used in this manner, the coagulant is exactly the same as formation aid.

For more information on the use of coagulant in papermaking, please refer to the article "Decorative Papermaking: Special Effects Using Luster Pigments", by Donna Koretsky in *A Gathering of Papermakers*, Carriage House Press, 1988.