

Coating

One of the simplest methods of producing a granule is to apply a coating of a liquid to a solid material by absorption. Coating can also be used to apply a fine powder to a solid core using a liquid sticker.

Often the solid material is a carrier for a liquid active, although this can be reversed where the solid material is the active ingredient and the liquid is a coating to control dust. In this process there is a slight change in particle size depending on the coating thickness. With the correct formulation, it is possible to control dust issues.

This type of granulation is generally done in a ribbon or drum blender (as below)

These mixers may be fitted with ancillary equipment including:

- screens or sifters to the inlet to remove larger lumps
- internal spray bars for even liquid distribution
- sieves on the outlet to remove undesired fines or oversize
- Indirect heating can be used to dry the coated granule if required
- flow booths to allow safe charging of hazardous liquids

Impregnation

This process is similar to the coating process and the same type of equipment may be used. The difference is that the liquid is absorbed into the granule structure. With a suitable formulation this can be used to deliver a liquid active material that can be released on application.

Impregnation is useful for getting a solid granule from a liquid active.

The same kind of ancillary equipment can be included in the design.

Products contract manufactured by Exwold using Coating & Impregnation techniques include:

- Insecticides- Nematacides & Aracacides
- Herbicides
- Speciality Applications such as Water treatment and Biocides

