

ATTAPULGITE



SHREE NARAYAN GREENTEK PRIVATE LIMITED



Attapulgite is a kind of crystalloid hydrous magnesium-aluminum silicate mineral; it has a special laminated chain structure in which there is a crystalline lattice displacement existed. The Attapulgite derives its non-swelling needle-like morphology from its three-dimensional crystal structure. The shape and size of the needles result in unique colloidal properties, especially resistance to high concentrations of electrolytes, and give high surface area, high porosity particles when thermally activated. Examples of industrial applications of attapulgite are reviewed with emphasis on how these characteristic properties function in the various end-uses.

The colloidal, adsorptive, absorptive, and catalytic properties of attapulgite have made it widely used by many industries. **S N Greentek** deals with various grades of attapulgite for Foundry Chemicals, Drilling, Bio – Fertilizer, Paints, Adhesive, Cat litter, Cosmetic and Pharmaceutical.

Foundry Chemicals

Grades of Attapulgite are used in manufacturing of Foundry Chemicals, Oil-base and water-base foundry sand binders and other application in Foundry



Bio - Fertilizer

Attapulgite is the obvious choice for this application because of its highly stable colloidalproperties in high concentrations of salts.

Pharmaceutical

Lack of toxicity and high adsorptive power has resulted in the incorporation of attapulgite in pharmaceutical preparations, including intestinal adsorbent preparations





Drilling

The drilling mud circulated through a well serves the primary function of removing bit cuttings from the hole. In addition, it lubricates the bit, prevents hole sloughing, and forms an impervious filter cake on the walls of the hole, thus preventing loss of the fluid to porous formations. Of utmost importance among the characteristics of clay for a drilling mud is the ability of the clay to build up a suitable viscosity at a relatively low solids level, and to maintain the desired viscosity throughout the drilling of the well.

Paints

Attapulgite has been used to replace organic thickeners in emulsion paints, resulting in a much more water-insensitive film, having improved color retention on washing because of the insolubility of the attapulgite thickener. Other advantages of attapulgite are its suspending characteristics for pigments, and its thixotropic properties which reduce sag and provide easy brushing. Attapulgite also acts as an emulsion stabilizer, serving as a protective colloid.

Adhesive

In the production of corrugated board the starch adhesives employed lose viscosity under shear, making it difficult to a constant amount of adhesive during a production run. As mentioned earlier, attapulgite develops viscosity under shear, so the incorporation of attapulgite has been an effective method of counteracting the loss of viscosity of the starch.



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