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# BENTONE® 27

BENTONE 27 is a new gelling agent which has been specially designed for the many other organic solvents and synthetic vehicles, such as are used in many industrial finishes and pigmented lacquers. It is also effective over an extremely wide range of organic liquids, including systems containing predominantly non-polar constituents. BENTONE 27 is notable for its very light color both in the dry and in the gelled state.

BENTONE 27 is an organic compound of a special montmorillonite*. It is supplied as a fine, creamy-white powder. The organic portion is linked to the montmorillonite through a stable chemical bond.

## Typical Fields of Application

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| Nitrocellulose lacquers | Alkyd varnish and fish |
| Anti-fouling paints | Varnishes |
| Vinyl resin primers | Vinyl dispersions |
| Industrial epoxy primers and topcoats | Adhesives |
| General industrial finishes | Mastic and potting compounds |
| Polyester resins | Epoxy resins |

## General Properties

*Effective Over a Wide Range of Organic Liquids*—BENTONE 27 produces strong stable gels in highly polar organic liquids, such as ethyl acetate, methyl ethyl ketone, and both acetate and ketone-based lacquer solvent systems. It also functions equally well in liquids of intermediate polarity, such as the chlorinated solvents and vegetable oils, and in such non-polar liquids as aromatic and aliphatic thinners (e.g. toluene, mineral spirits and odorless mineral spirits). BENTONE 27 appears to be the most versatile thickening agent known commercially because of its distinct gelling action over a wide range of organic solvents and finishes.

*Reproducible Thixotropic Viscosity Control*—BENTONE 27 gels are predictable, stable and reproducible. A given amount of BENTONE 27, properly incorporated, will produce consistent viscosity characteristics, time after time. Because of the straight line relationship between the amount of BENTONE and gelling effect produced, the influence of raising or lowering the amount of BENTONE can be readily predicted. The viscosity increase imparted by BENTONE 27 remains remarkably constant over long periods of time in gasoline storage, regardless of wide variations in temperature. A typical example in which these advantages are of special value is the use of BENTONE 27 to convert the "soupy" mixture of many synthetic finishes, where the original brushing and spraying properties may be unsatisfactory.

*Particle Suspension*—BENTONE 27 prevents hard settling of suspended pigments or heavy inactive particles, fibers, or abrasives. Redispersion of such settled particles then becomes a matter of gentle agitation, rather than the serious problem usually associated with hard settled particles. Uniform particle suspension is especially important in such products as anti-fouling paints, vinyl primers, epoxy paints, and many paste products, such as enamels, chemical preparations, and color pastes.

*Additional Properties of Interest*—BENTONE 27 gels prevent free motion of pigment particles in an organic liquid. This property keeps settled pigments of different shapes from separating or forming layers in mixed pigment paints, and prevents color flooding. BENTONE 27 gels also help to prevent excessive penetration or "soaking in" of liquid vehicles into porous surfaces. In addition, BENTONE 27 exerts a strong reinforcing action in non-rubbery organic compositions.

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* Montmorillonite is a platelet-shape mineral having a crystalline form.

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**BENTONE® 27**

*Raw Thickening and Suspending Agent for Industrial Finishes*

A Product Development of National Lead Company

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