



### Coating Technology

Many uses of cenospheres need surface coatings on the individual particles for improved performance. Molded plastic parts are an example. In this case the functional additive (cenosphere) will not bond with the resin matrix and causes what is known as a stress riser or a weakness in the molded part. A simple coating such as a silane causes a permanent bond and actually improves strength of the molded part.

In the simplistic use of cenospheres, they are functional fillers as described above. When more functionality is added to the cenosphere particle or substrate the coating takes on much greater importance and becomes the desired use with the substrate becoming the carrier. An example of this would be metal coatings such as silver. The silver coated cenosphere becomes an electrically conductive particle and can be used to shed static electricity or reflect electromagnetic radiation such as radar or infrared radiation.

The spherical shape is nature's perfect surface area for coating purposes; the surface is even, and it is efficient in terms of low surface area to volume. The spherical shape processes easily due to its ability to "wet" completely and "flow" evenly due to less viscosity. Cenospheres, in particular, offer many properties as coating substrates. They are light, buoyant, mostly inert, available as a recycled by-product of energy generation, and cost effective.

AshTek has exclusive access to cenospheres that are, even in raw form, excellent for use as coatings' substrates. Furthermore, AshTek will have the harvesting and processing technology to improve the quality of the cenospheres by controlled cleaning, removal of oversized and broken spheres, and sorting by size, all accomplished at relatively low cost when compared to today's industry standard. All other coating companies must take the previously dried cenosphere, wet them for cleaning and dry again. It is even possible to introduce the more simple water based coatings through the mobile processing unit.

AshTek will develop coating technologies to generate greater sales to customers that require functionally improved additives to their products. Plastics, paints & coatings, electric wire & cable covers are a few of the target customers.

The value added by this operation increases our profit margin many fold. Few of our competitors offer this service and by doing so we will differentiate ourselves from the pack immediately.