

HD-1000 Powders Series

Ingredients

Description

The HD-1000 series is part of Inhance Technologies' Performance Additives. The HD-1000 series' products are used to impart abrasion resistance, reduce coefficient of friction and improve mechanical performance in formulated coatings, adhesives, elastomers and composites. The products are High Density Polyethylene (HDPE) particles that are surface activated, permanently increasing their surface energy. This increase in surface energy makes otherwise incompatible HDPE particles highly compatible in formulated systems. Increased compatibility leads to better dispersion, as well as better interfacial adhesion between the matrix and the dispersed phase, leading to overall better performance.

Particle Sizes Available

Grade	D50 particle size (microns)
HD-1800	20
HD-1150	70

Typical Physical Properties

Property	Value
Form	Spherical
Specific Gravity	0.953 - 0.955
Bulk Density	0.40 g/cc
Melt Temp.	132°C - 134°C
Surface Energy	~50 dyne/cm (water wettable)

Dosage and Use

Comprised of durable and long-lasting materials, Inhance Technologies' HD-1000 series provides good durability and extended service life in wear environments, including conveyance rollers, high performance composites and transportation industries.

Extended service life decreases production downtime and replacement costs, thus maximizing productivity. Incorporation of HD-1000 products into polymeric systems result in improved wear performance, reduced coefficient of friction and improved tear resistance.

These particles can also be used to improve the impact performance of stiffer materials, such as epoxies. Typical loading of these additives range from 5% - 20%. HD-1000 series powders can be added in coatings and adhesive formulations, cast elastomers, as well as thermoplastic and engineering plastics.



HD-1000 series' products provide exceptional durability and extended service life in extreme wear environments.

Ingredients

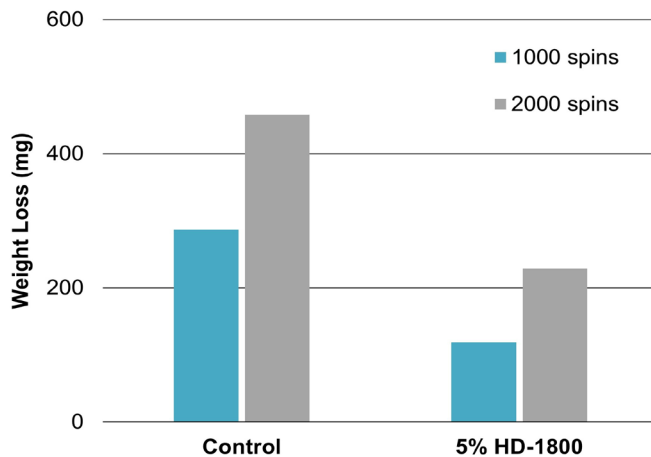
Benefits

- Excellent abrasion resistance
- Reduced coefficient of friction
- Enhanced tear strength
- Prolongs wear life
- Superior dispersion
- Light diffusion

Applications

- Structural adhesives
- Composites
- Thermoplastics
- Thermosets
- Anti-wear, slip & low friction coatings
- Sealants
- Elastomers

Abrasion Data



Addition of HD-1000 products to PU improves the wear resistance by 4 times. Tested using Taber Abrasion Index (ASTM D4060).



Conclusion

Addition of HD-1000 series' products improve wear resistance and prolongs the life of gears, while enhancing performance and reducing costs.

Inhance Technologies solutions' can be applied in a number of industries to improve product performance and sustainability:

Consumer Goods

Transportation

Industrial Products

Fuel Systems

Healthcare

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Contact Information

+1.800.929.1743 | additives@inhancetechnologies.com | inhancetechnologies.com