



PERFORMANCE ADDITIVES

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Imparting wear resistance, lubricity and strength

Inhance Performance Additives are surface activated polymeric powders for formulated systems, including Epoxies, Polyimides, Polyureas and Polyurethanes and Acrylics, that impart increased wear resistance, lubricity and mechanical strength to formulations. These products serve a variety of industries such as composites, elastomers, coatings, and adhesives and sealants

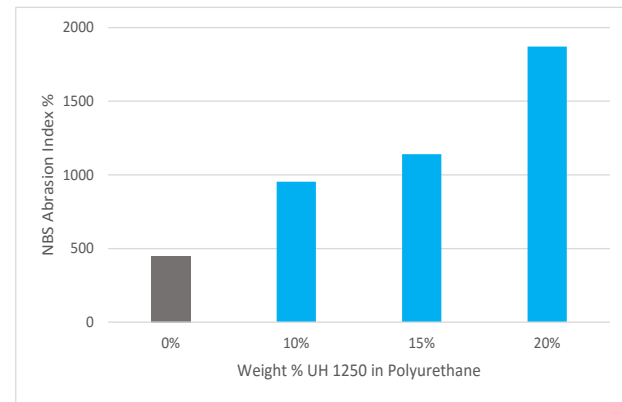
COMPATIBILITY DRIVES PERFORMANCE

The performance of formulated systems is driven by careful selection and integration of the components. To obtain the optimum performance, it is critical that additives are well dispersed and exhibit good interfacial adhesion to the matrix. Not only will this maximize performance, but it can also significantly increase the useful life of the final product and optimize formulation costs.

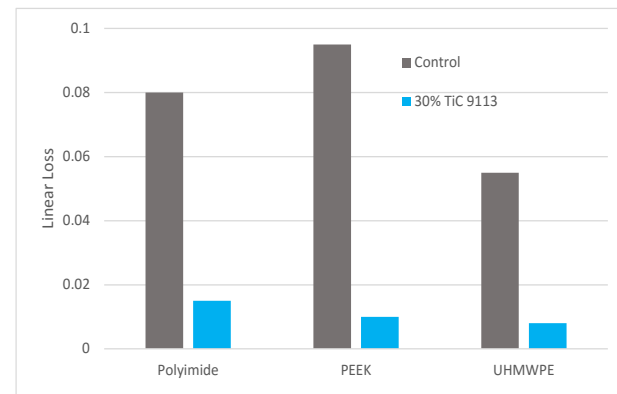
Inhance Performance Additives are surface-activated polymeric powders, produced through our Reactive Gas Technology™ (RGT) - which permanently increases surface energy of particles - making them highly compatible in formulated systems. Possessing surface energy in the range of 60 dynes/cm, these particles are readily dispersed in polar formulations, imparting abrasion resistance, reducing coefficient of friction and increasing mechanical strength.

TOUGH TO THE CORE

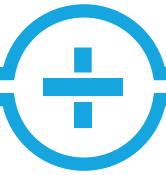
Comprised of highly durable, temperature resistant and long wearing core materials, including Ultra High Molecular Weight Polyethylene (UHMWPE), Silica Carbide (SiC), Titanium Carbide (TiC) and Polyaramids, these additives provide exceptional durability and extended service life to parts and coatings in severe wear environments including mining, oil field, conveyance rollers, high performance composites and transportation industries. Extended service life decreases production downtime and replacement costs, thus maximizing productivity.



Addition of UH particles to PU improves the wear resistance 4 times. Tested using NBS Abrasion Index (ASTM D1630)



Addition of TiC particles to PEEK, UHMWPE and Polyimides decreases wear. Tested using Taber Abrasion (ASTM D3389)



BENEFITS

- Excellent abrasion resistance
- Reduced coefficient of friction
- Enhanced work to fracture
- Enhanced tear strength
- Prolongs wear life
- Superior dispersion

APPLICATIONS

- Hot and cold cure elastomers
- Structural adhesives
- Composites
- Thermoplastics
- Thermosets
- Anti-wear, slip & low friction coatings
- Sealants

OFFERINGS

PRODUCTS	PARTICLE SIZE μm
UH Series: UHMWPE	10 - 300
HD Series: HDPE	20 - 300
TiC Series: Titanium Carbide	4 - 60
SiC Series: Silica Carbide	4 - 60
Fibers and Pulp	Polyaramid, PE



Addition of UH particles improves wear resistance and prolongs the life of cast wheels and rollers, reducing formulation costs, replacement time and expense



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