



## **CHALLENGE 543-HT**

### **LAPPING/POLISHING SLURRY ADDITIVE FOR SUSPENDING NON-TREATED ABRASIVE**

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**CHALLENGE 543-HT** is a medium viscosity lapping/polishing slurry additive which evenly disperses and suspends a variety of non-suspension-treated abrasives, including aluminum oxide, zirconium oxide, along with silicon carbide, boron carbide, synthetic and natural diamond, and garnet. Because of its superior suspension characteristics, CHALLENGE 543-HT reduces the amount of abrasive grain needed by up to 50%, while providing equal, and often greater, stock removal rates. 543-HT is particularly effective when using equipment with smaller slurry feed tubes, which constrict flow of high viscosity products.

#### **Benefits:**

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- Flatter parts
- No scratching
- Less sub-surface damage
- Easier post-lap cleaning
- Increased removal rate
- More consistent results
- Reduced abrasive usage

#### **Directions:**

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CHALLENGE 543-HT should be mixed with deionized water and abrasive using the following slurry formula: 77-82% water, 15-18% abrasive, 3-5% CHALLENGE 543-HT. Use an agitator with a marine type propeller and a motor capable of 1750 RPM. Use a low shear dispense pump for feeding the mixed slurry onto the lap.

Disperse the abrasive with DI water at 1000 rpm for 3 minutes. Add 543-HT. Mix for approximately 10 minutes depending upon abrasive surface chemistry. Be careful not to suck air into the slurry when mixing. A small vortex should form at the surface of the slurry. Turn the mixer off, or to a maximum of 50 rpm. For more detailed directions, request document #DOC-DIR-543HT.

#### **Additional Information:**

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CHALLENGE Products are available in 5-gallon pails and 55-gallon drums, F.O.B. Bethel, Connecticut, and also include: grinding fluids, sawing fluids, rinse/wash agents and ultrasonic/megasonic detergents. Material Safety Data Sheets available upon request.