

CHALLENGE 310-HT **SYNTHETIC GRINDING FLUID FOR CERAMIC AND OPTICAL MATERIALS**

CHALLENGE 310-HT is an aqueous based synthetic formulation developed to optimize removal rate and surface finish in grinding, sawing, and dicing processes using diamond grinding wheels and blades. The product's exceptional heat transfer characteristics insure prolonged diamond life, even with the most difficult materials. CHALLENGE 310-HT has an added characteristic of enhanced detergency that helps to keep the machine and work area more clean of grinding swarf and debris.

CHALLENGE 310-HT is a low foaming coolant whereas the CHALLENGE 300 HT does not foam. The product is compatible with all type filtration systems allowing for extended use. Although it is a moderate foaming product it will still promote easy application providing a laminar flow of coolant to the wheel/work-piece interface for fine finishes and prolonged tool life.

Typical Properties:

Surface, Blanchard Type, O.D./Cylindrical, Edge/Bevel/Dicing, Core Drilling, Diamond Wire Sawing,

Benefits:

- Better surface finishes
- Faster removal rates
- No foam
- Extended diamond life
- Non-staining
- Compatible with all filtration systems
- Non-corrosive to ferrous metals
- Operator acceptance

Typical Properties:

pH	9.0
Conductivity Ms	5.3
Specific Gravity	1.03

Directions:

Designed for use at low concentrations and is effective in hard, soft and DI water.

Surface/Blanchard	3% - 5%
O.D./Cylindrical/Core Drilling	3% - 5%
Edge/Bevel/Dicing	2% - 3%
Diamond Wire Sawing	3% - 5%

Maintaining dilution ratios with a hand-held refractometer is recommended. A pH meter is also useful. Develop production-specific scales by obtaining accurately measured samples of a properly diluted mixture that corresponds to use.

Additional Information:

CHALLENGE Products are available in 5-gallon pails and 55-gallon drums, F.O.B. Bethel, Connecticut, and also include: grinding fluids, sawing fluids, lapping/polishing slurry additives, rinse/wet storage additives and ultrasonic/megasonic detergents. Safety Data Sheets available upon request.

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