



CHALLENGE 300-SERIES SYNTHETIC GRINDING FLUIDS

CHALLENGE 300-Series Products are synthetic formulations 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 300-Series Products are compatible with all filtration systems, and its foam-free operation promotes operator acceptance.

Benefits:

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

Directions:

CHALLENGE 300-HT is designed for use as a general purpose grinding coolant used at economical dilution ratios. CHALLENGE 310-HT is designed for more critical grinding apps where difficult to grind substrates have a tendency to "load" the matrix with debris and cause problems such as deflection and poor surface quality. Also, CHALLENGE 310-HT will keep the machine cleaner when excessive generation of grinding swarf combined with splashing may cause hardening of swarf on machine fixtures. For extreme conditions where rapid settling and softer grinding swarf is required, CHALLENGE 315-HT will perform best. All products may be used in hard and soft water although extreme hard water will cause them to be less effective. For optimum results, use with DI water. Follow the dilution ratios listed below, making production specific adjustments as needed:

| | | |
|-------------------|---|---------|
| Surface/Blanchard | - | 30-50:1 |
| O.D./Cylindrical | - | 30-50:1 |
| Edge/Bevel/Dicing | - | 50-75:1 |

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 with the water being used and obtain a reading on the instrument. Maintain a higher concentration for recirculating, filtered coolant systems.

Additional Information:

Challenge products are available in 5-gallon pails and 55-gallon drums, F.O.B. Bethel, Connecticut, and also include: sawing fluids, suspension additives for lapping/polishing slurries, rinse/wet storage additives, and ultrasonic/megasonic detergents. Material Safety Data Sheets available upon request.

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