



# VECTOR HTI-1.1

## SYNTHETIC COOLANT/LUBRICANT FOR SILICON CROPPING, SAWING AND EDGE-GRINDING IN NON RE-CIRCULATING APPLICATIONS

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VECTOR HTI-1.1 is a synthetic formulation developed for use in “once-through” processes using diamond blades or diamond wires. With its exceptional heat transfer capability, VECTOR HTI-1.1 quickly cools the diamond blades or wires for longer diamond life, while the product’s superior detergency keeps the diamond interface clean and free cutting for both increased cutting speed and reduced blade or wire deflection.

For producers of solar silicon wafers, VECTOR HTI-1.1 is recommended as a once-through coolant for cropping and squaring silicon slabs and ingots. VECTOR HTI-1.1 allows consistent, sustainable cutting at the higher speeds typical of diamond wire cropping and squaring saws. VECTOR HTI-1.1 can also be used as non re-circulating coolant for edge grinding silicon ingots and wafers.

VECTOR HTI-1.1 is for use in “once-through” systems only.

### Benefits:

- Extended blade and wire life
- Increased production
- Lowest sub-surface damage
- Less bow and warp
- Reduced blade and wire deflection
- Elimination of exit chipping
- Elimination of substrate tear
- Cleaner machines and working conditions
- Non-staining, non-corrosive and odor-free

### Directions:

VECTOR HTI-1.1 is designed for use at very high dilution ratios. It is typically evaluated at a ratio of 400 parts water to 1 part product (.25%). Since the dilution ratio is so high, water quality plays an important role in the performance of the fluid make-up. Deionized (DI) water works best because of the elimination of ion interference with the surfactant base. Softened or fairly normal tap water will also perform adequately if the quality does not fluctuate.

We recommend that dilution ratios be maintained with a conductivity meter and a pH meter. For consistent results, develop production-specific scales by obtaining accurately measured samples of a properly diluted mixture that corresponds to use. Use this product in “once-through” systems only.

### Additional Information:

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

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