



CHALLENGE 900-FPD SERIES PRODUCTS

LOW FOAM DETERGENTS FOR CLEANING FPD GLASS AND SOLAR WAFERS

CHALLENGE 907-FPD, 910-FPD and 912-FPD are low-foaming water-based detergents formulated to perform in high pressure spray wash and brush clean applications where mechanical operation makes foam an issue, but, ultra-clean surfaces are always a necessity. These unique formulations provide the surface wetting and detergency needed to remove organic and inorganic contamination and particles from glass, ceramic and semiconductor substrates.

CHALLENGE 910-FPD is also recommended for cleaning wire saws prior to initial charging with slurry or coolant. CHALLENGE 910-FPD will clean the system thoroughly without leaving behind residue that could cause foaming of the slurry or the coolant.

Designed using dynamic contact angle measurement analysis on the latest glass substrate, CHALLENGE 907-FPD, 910-FPD and 912-FPD cleaning test results show cleaner glass surfaces yielding contact angles of UP DI water at below 10°. Similar results are shown using silicon carbide, lithium niobate and silicon substrates.

Benefits:

- Superior wetting with extremely low foam
- Free rinsing - leaves no film or residue
- Economical to use
- Fully compatible with other CHALLENGE and VECTOR products

Products Description:

CHALLENGE 907-FPD is a neutral pH, low foaming detergent, 910-FPD and 912-FPD are both alkaline low foaming detergent. The pH of the concentrate of CHALLENGE 912-FPD is ~13.5 and the pH of a 4% solution is ~12.5. At this pH the product is extremely effective at removing all typical contaminants found on glass substrate. Since higher pH levels are not always necessary to precisely clean different substrates in certain processes, CHALLENGE 907-FPD and 910-FPD are available. These products are essentially the same as CHALLENGE 912-FPD only manufactured with different inorganic components. IDI can instruct the customer on how to add caustic tank-side to reach the precise pH regime needed for effective "application specific cleaning". If different pH regimes are needed for different processes, CHALLENGE 907-FPD will allow for customer controlled pH adjustments from 7 to 13. This also alleviates handling and transportation issues related to the caustic nature of CHALLENGE 912-FPD.

Directions:

It is recommended that evaluation of 900-FPD Series products begin at a 5% concentration mixed with 45° C de-ionized (DI) water, although tap water that does not contain hard water ions is also acceptable. Since the type and degree of residue to be removed varies, these factors will ultimately determine specific "in-house" dilutions. Other factors to consider include temperature, exposure time and functioning of the spray wash/brush-clean or other mechanical cleaning system. For cleaning wire saws, fill the slurry/coolant tank with a 4-5% solution of water and 910-FPD. Circulate throughout the machine until clean. Rinse system with water and recharge with slurry or coolant.

Additional Information:

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

**Manufactured by: Intersurface Dynamics, Inc.,
21 Clarke Circle, P.O. Box 181, Bethel, CT 06801
Tel 203-778-9995 • Fax 203-778-4659 • Email: admin@isurface.com
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