MISCELLANEOUS PRODUCTS FOR AQUEOUS PROCESSING

ALPHA 926, 2002D, 2007, 2444

DESCRIPTION

926 SCALE REMOVER
A biodegradable formulation for the removal of mineral deposits frequently seen when using “hard” water in aqueous cleaning equipment. Alpha 926 works by dissolving and sequestering calcium, magnesium and iron carbonates and oxide scale.

2002D DEFOAMER
Reduces excessive foam in aqueous systems, including alkaline cleaning of rosin flux residues from printed circuit boards and assemblies. Can be used effectively in hot washing solutions or cooler rinsing solutions. This formulation contains silicone.

2007 DEFOAMER
A Silicone-free material that reduces excessive foam in aqueous systems, including alkaline cleaning of rosin flux residues from printed circuit boards and assemblies. Can also be used effectively in hot washing solutions or cooler rinsing solutions.

2444 RINSE AID
Biodegradable, alkaline, organic concentrate to assist in the removal of residues following soldering and fusing processes using water-soluble fluxes.

USES

926 SCALE REMOVER
Removes deposits that tend to form on wetted parts of aqueous cleaning equipment, such as spray nozzles, heating elements, screens and tank surfaces. Such deposits can clog nozzles and screens, and cause heating elements to burn out.
The descaling procedure for a conveyorized cleaner wash tank is as follows:

1. Turn off wash tank pump and heaters.
2. Drain wash tank of rosin saponifier, neutralizer, etc.
3. Rinse with fresh water using a garden hose attachment and drain.
4. Fill tank with water and 5% by volume of **Alpha 926**.
5. Heat to 120° F.
6. Start pump and circulate for one hour.
7. Turn off pump and heaters and drain tank completely.
8. Rinse thoroughly using garden hose and drain.
9. Refill the tank with fresh water.
10. Start pump and circulate for 10 minutes (no heat).
11. Turn off pump and drain tank completely.

**2002D DEFOAMER**
Can be used as is or diluted with water. As a rule of thumb, ½ oz. or 15cc (1 tablespoon) as received should be added for each 20 gal. of solution capacity (equivalent to 200 ppm). For minimum usage to control foam, pre-dilution in at least three parts of process water is recommended. The “as received” or diluted defoamer can be added directly to the cleaning solution reservoir, where the recirculating action will effectively disperse it. Stored defoamer should be shaken or agitated before use.

**2007 DEFOAMER**
**Alpha 2007 Defoamer** is a silicone-free defoamer that can be used as is, or diluted with water. A typical dilution of 1 ounce (or 30cc) should be used for each 20 gallons of solution capacity. The defoamer is particularly useful when used in a closed-loop water cleaning system. Most defoamers tend to be filtered out in the 5 micron filters commonly used in closed-loop systems, thus significantly reducing the life of the filter. **Alpha 2007 Defoamer** was engineered to pass through the filter, thereby, maintaining the life of the filters.

For minimum usage to control foam, addition in small quantities at regular intervals of time is recommended. The defoamer can be used as received or may be pre-diluted in three parts of process water for effective dispersion.

**2444 RINSE AID**
Can be used in aqueous in-line spray cleaning or dip systems following the reflow or wave soldering of printed circuit assemblies using water-soluble fluxes. In conveyorized spray cleaning equipment, 1-3% of 2444 is added to the heated, recirculating wash section to assist the cleaning water in penetrating crevices and in solubilizing flux residues.

Dilution of 2444 in warm or hot water produces a normal turbidity. Solutions of 2444 have very low foaming properties and no ammonia odor. **Alpha 2444** serves to neutralize the acidic flux residues which can build up in concentration to the point where solder joints could become etched.

In batch, dip, or soak tanks, a pre-rinse in tap water is used to remove the bulk of the flux residues, followed by hot dipping in 1-3% 2444 to remove remaining traces of flux.

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Washing in 2444 is always followed by thorough water rinsing to insure removal of the dissolved flux residues and the rinse aid from board surfaces. If a high order of ionic cleanliness is desired, the final rinse should be in DI water.

**PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>926</th>
<th>2002D</th>
<th>2007</th>
<th>2444</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, Yellow</td>
<td>Creamy, White</td>
<td>Clear, Viscous</td>
<td>Blue Liquid</td>
</tr>
<tr>
<td></td>
<td>Liquid</td>
<td>Emulsion</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity at 25°C (77°F)</td>
<td>1.31</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
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<tr>
<td>Lbs./Gal. at 25°C (77°F)</td>
<td>10.9</td>
<td>8.3</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>pH of Concentrate</td>
<td>2.0 (typical)</td>
<td>N/A</td>
<td>N/A</td>
<td>13.2 (typical)</td>
</tr>
<tr>
<td>Flash Point of Concentrate</td>
<td>None</td>
<td>None</td>
<td>200°C</td>
<td>99°C (COC)</td>
</tr>
</tbody>
</table>

**STORAGE, HANDLING, SAFETY**

**ALL PRODUCTS**

When handling, wear safety goggles and protective gloves. Contact with skin or eyes should be avoided. In case of eye or skin contact, prompt rinsing with water for 15 minutes is recommended.

**926**

This product is biodegradable. Discharge of effluent must be in accordance with local, state and Federal regulations.

**2444**

Containers carry a D.O.T. “corrosive” label. Do not transfer to aluminum or galvanized containers. Adequate ventilation is recommended when diluting the concentrate and for the diluted product in use. Cleaning equipment materials of construction should not include among the wetted parts: Lexan (polycarbonate), Viton, Neoprene, or natural rubber; copper, aluminum, brass or galvanized metals. This product is biodegradable. Discharge of effluent must be in accordance with local, state and Federal regulations.

**PACKAGING**

Alpha 926 and 2444 are packaged in 5 and 55 gallon containers. 2007 is packaged in plastic one-pint and gallon containers.

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