OPERATING INSTRUCTIONS
HN503™ Pre-Dip
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HN503™ Pre-Dip

Introduction

HN503™ Pre-Dip is an aqueous solution containing all of the components of the HN504™ Activator bath except the metal colloids. Parts wet with water from prior processing are immersed in HN503™ to displace the water from the parts. This minimizes introduction of excess water into the HN504™ Activator bath.

Operating Conditions

CONCENTRATION HN503™ 100%

TEMPERATURE
Room temperature

<u>DWELL TIME</u> 10~60 seconds (20 seconds preferred)

Make Up and Operating Procedures

Place undiluted HN503™ Pre-Dip into a freshly cleaned tank. Using parts freshly processed in the sodium persulfate microetch, immerse well-rinsed parts in HN503™ Pre-Dip for 10-60 seconds. Agitate parts horizontally so that HN503™ is forced through holes and into blind vias. A rack agitator with a 2-4 inch stroke operated at 12-15 strokes per minute is satisfactory. After soaking 10-60 seconds, remove parts and transfer parts immediately to the HN504™ Activator bath while still wet with HN503™ Pre-Dip. Do NOT water rinse parts processed in HN503™.

HN503™ Pre-Dip is saturated with inorganic salts. Crystals are usually present in the bottom of the containers. When transferring HN503™ from the containers, agitate the solution to suspend the crystals. DO NOT use water to rinse crystals out of containers into the tank. It is okay to have extra crystals left in the container.

Control Data

Shop Level Control

Replace dragout losses and evaporation losses with fresh HN503 $^{\text{TM}}$. Do NOT make up evaporation or dragout losses with tap water or distilled or deionized water. If Baume' drops below 20 (concentration < 80%), drain half of the tank and replace with fresh HN503 $^{\text{TM}}$ Pre-Dip.

Replenishment

Add fresh HN503[™] at a rate of 1 gallon per 1,000 square feet of surface processed through the bath. The preferred method of additions is by a constant feed and bleed system; however, periodic manual additions to the bath are usually adequate.

Bath Recharging Cycle

Discard the entire bath and recharge with fresh HN503™ when the total surface area processed reaches 1,750 square feet per gallon of bath.

Equipment

Tanks made of polyethylene, polypropylene, PVC, or CPVC may be used with HN503™. Heaters of quartz or Teflon are satisfactory, but should only be required in subfreezing temperatures.

Laboratory Control

Analysis of HN503[™] solutions is not usually required if density (Baumé) of the bath monitored and bath is replenished using fresh HN503[™].

Handling and Safety

HN503™ may be irritating to skin and eyes. Protective clothing such as impervious gloves, aprons, boots and chemical goggles should be worn when handling this material. In case of accidental contact, flush with water. Remove contaminated clothing and wash before wearing again. For eye contact, flush with water for 15 minutes and seek medical attention at once. HN503™ may be harmful if swallowed. Avoid breathing mists and vapors. **READ MSDS**.

The information and recommendations of Solution Technology Systems concerning this product are based on laboratory tests and experience and to the best of our knowledge and belief are true and accurate. Since conditions of actual use are varied and beyond our control, any recommendations or suggestions are made without warranty expressed or implied.