

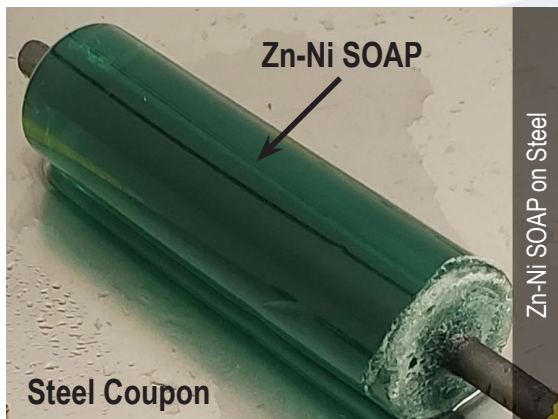
COPPER & NICKEL SOAP



COPPER SOAP ON MONEL



Zinc-Nickel (Zn-Ni) SOAP



Zn-Ni SOAP on Steel

A REVOLUTIONARY ADVANCE IN BRUSH PLATING

Oceanit has developed an innovative 'System of Advanced Plating' that significantly reduces complexity, environmental impact, and cost of brush plating.

How SOAP Works:

SOAP is a proprietary technology that combines a molded solid electrolyte of metal, (such as copper, zinc, chromium, nickel zinc-nickel, etc.) with a conducting electrode to perform brush electroplating. The SOAP electrolyte can be molded into any desired shape for various geometries. With the simple application of a de-ionized water and an electrical potential, the solid electrolyte releases metal ions uniformly over the substrate.

The conventional brush-plating process remains operator-sensitive, generating hazardous waste (liquid acid/alkali waste) and requiring constant hazardous solution recirculation. Plating is conducted with a wand which is constantly fed with electrolyte plating solution. The process is messy due to the need for drip-catching and recirculation of the electrolyte.

Brush-plating with SOAP requires no electrolyte circulation, only water sprayed on the SOAP and surface. This allows SOAP to be used in tight spaces with minimal Personal Protection Equipment (PPE) needed.

Key Benefits of SOAP:

- Allows almost total elimination of liquid (acid/alkaline) waste
- Eliminates the need for plating solution recirculation and related equipment
- Improves user maneuverability, control of deposition thickness, and uniformity of plating
- Environmentally friendly, biodegradable, and requires minimal personal protective equipment (PPE) for handling, storage and disposal
- Provides savings on operation time and additional equipment cost

Zn-Ni SOAP is a safe alternate to carcinogenic cadmium brush plating. An environmentally friendly, easy to brush plate tool for Zn-Ni plating on steel and aluminum aerospace components to achieve superior corrosion protection.

Zinc-Nickel SOAP	
Composition	8-15% Ni: Rest Zn
Electrolyte	Solid
Form factor	Moldable to rods, sheets or blocks
pH	Alkaline (pH>12)
Electrolyte Recirculation	Not Required
Deposit Structure	Microporous
Average Hardness	152 HV
Maximum Thickness	0.005 inch (125µm)
Plating Voltage/Current Density	8-12V/3-5ASD
ASTM B571 Qualitative Adhesion Testing of Metallic Coating	PASS (Tape and Bend Adhesion)
Corrosion Resistance	100 hours (ASTM B 117)
ASTM F519 Hydrogen Embrittlement	No Hydrogen Embrittlement (No baking required, no failure after 200hrs Notch Tensile Strength)
Standard Testing	Meets MIL-STD-870/AMS-QQ-P-416 specification