Emerald™ Paint-Prep 389 NP

Emerald Paint-Prep 389 NP is a phosphate-free cleaner coater with no regulated heavy metals. It is designed to provide an effective cleaning and a conversion coating that can be applied successfully at temperatures ranging from 80°F to 110°F in spray wand applications. Emerald Paint-Prep 389 NP provides a microcrystalline surface in the nanometer (10^{-9}m) while conventional iron phosphate coatings are usually in the micrometer (10^{-6}m) range. These "nanocrystals" increase the surface area of the substrate thus enhancing paint adhesion, corrosion protection and consequently salt-spray results.

Emerald Paint-Prep 389 NP is easily injected into a spray wand system and is instantly soluble. It will clean light to medium shop soils, drawing compounds, rust preventatives and water-soluble machining fluids. Typical dwell times will vary depending on the severity of the soils and types of metals to be cleaned. Since Emerald Paint-Prep 389 NP has no phosphate waste treatment costs and other effluent issues are greatly diminished. Emerald Paint-Prep 389 NP is a highly effective cleaner and it prepares ferrous and non-ferrous substrates for painting by converting their surfaces into an amorphous conversion coating. Emerald Paint-Prep 389 NP generally operates from 1% to 5% by volume, which is comparable to conventional iron phosphate products.

Features & Benefits

Phosphate free	No phosphate waste treatment
Cleaning and conversion coating	Two steps into one step

Operating Conditions

Appearance	Clear, light amber liquid
Foaming ability	Controlled (low)
pH of 2% solution	4.0 – 4.4
Rinsing ability	Superior
Solubility	Excellent
Specific gravity	1.01 – 1.03

Operating Conditions

Emerald Paint-Prep 389 NP is safe to be used as a phosphate-free conversion coating and paint-pretreatment for most metals.

Usage procedure
Emerald Paint-Prep 389 NP is recommended for use at concentrations between 1 and 5%. The product should be followed by a water rinse. Consult your Hubbard-Hall representative for optimum operating concentrations.

Equipment
All equipment, piping and pumps should be constructed of 304 or 316 stainless steel alloys. If mild steel is used in construction, it must be appropriately lined. Chemical feed pump parts made from elastomers can be Buna-N, EPDM, Hypalon, Viton or Teflon. Consult your Hubbard-Hall representative.

Test Kit Method

1. Place a 25 mL sample in mixing bottle.
2. Add approximately 5 drops of Phenolphthalein indicator to mixing bottle.
3. Add 0.1 N Sodium Hydroxide Solution to the mixing bottle dropwise, counting the number of drops to turn the test solution from clear to pink.
4. Record the number of drops used.
5. Compare the number of drops to the table below to determine concentration.

Drops of 0.1N NaOH	% Concentration	Drops of 0.1N NaOH	% Concentration
6	0.5	36	3.0
12	1.0	42	3.5
18	1.5	48	4.0
24	2.0	54	4.5
30	2.5	60	5.0

Caution

Emerald Paint-Prep 389 NP should be stored in a cool dry area. Store away from incompatible substances; refer to product SDS.

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**For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com**

Hubbard-Hall holds certifications for **ISO 9001:2015**, Responsible Distribution, as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**[136].

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