Cleaner 200 PWA

Cleaner 200 PWA is a powdered alkaline product, which may be used as an electro, immersion, or soak / electro cleaner (single tank). It is formulated to be a highly conductive electro cleaner for cleaning Stainless Steel, steel, cast irons, nickel plated parts, cobalt base alloys, copper, and copper plated steel parts.

Cleaner 200 PWA may serve as a general-purpose soak-electro cleaner for the removal of such soils as stamping oils, water soluble fabrication compounds, polishing and grinding compounds, machining, forming, and drawing lubricants.

Due to its unique formulation, Cleaner 200 PWA should be considered as the electro cleaner of choice when smutted steel is encountered.

Features & Benefits

High conductivity	Outstanding particulate (smut) soil removal
Contains no chelating agent	Meets Pratt & Whitney specification PMC 1256
May be used on many metal substrates	Allows for high speed in “reel to reel” lines

Physical Data

Specific gravity	1.18
Solubility in water	Complete
Appearance and odor	Yellow to amber, mild sweet odor
pH 10% solution	7.5 – 8.5
pH concentrate	8.0 – 9.0

Typical Applications

- Soak cleaning in plating lines
- Electro cleaning in plating lines
- Soak cleaning in “reel to reel” plating lines
- Soak, spray, and electro cleaning in strip lines

Operating Conditions

Electrocleaning Operation

Cleaner 200 PWA may be used anodically, catholically, or as P.R. cleaner. The polarity will depend upon the type of metal surface being electro cleaned and the soil being removed.

Concentration	8 – 32 oz/Gal (60 – 240 g/L)
Temperature	140°F – 205°F (60°C – 91°C)
Current density	60 – 100 amps/ft^2 (6 – 10 amps/dm2)
Equipment	Mild steel tanks, anodes and coils
Ventilation	Required when used as an electro cleaner

Note: Cleaner 200 PWA may also be used to strip chrome plate and tin electroplate from parts that are to be replanted.

Immersion Cleaning Parameters

Note: Cleaner 200 PWA should not be used as the cleaner for: aluminum alloys, zinc die-castings, galvanized surfaces, titanium or titanium alloys.

Concentration	6 – 16 oz/Gal (45 – 120 g/L)
Temperature	120°F – 200°F (49°C – 94°C)
Immersion time	3 – 6 minutes
Equipment	Mild steel tanks and heating coils
Ventilation	Suggested when operating above 150°F (66°C)

The lower concentrations and operating temperatures should be used to clean brass, bronze, silver and silver brazed parts. Ferrous metals and copper may be cleaned with concentrations in excess of 8 oz/Gal (60 g/L) and at the higher temperatures.

Tank Make up Procedure
CONSIDERABLE HEAT IS GENERATED when Cleaner 200 PWA is dissolved in water. A new solution should be prepared by filling the tank half full of warm water (approx. 100°F, 37°C), and slowly adding Cleaner 200 PWA while continuously stirring. After the Cleaner 200 PWA has been dissolved, add the remainder of the cold water. Heat or cool to desired operating temperature before use.

Note: When adding Cleaner 200 PWA to an operating solution, add slowly to avoid solution eruption. It is preferred to make additions to cool solutions (less than 100°F.)

Titration Method

1. Pipette a 10 mL bath sample into a 250 mL Erlenmeyer flask.
2. Add 50 mL of distilled water to the flask and 5 drops Phenolphthalein indicator. Mix well.
3. Using 0.5 N Hydrochloric Acid, titrate to a colorless end point.
4. Record mL used.

Calculation

Factor (oz/Gal) 0.33
Factor (g/L) 2.46
Concentration = mL 0.5 N HCl x Factor

Test Kit Method

1. Fill sample bottle ¼ full of water.
2. Using the syringe, place 1/2 mL sample of Cleaner 200 PWA solution into flask.
3. Add 8 to 10 drops of methyl orange indicator.
4. Add 0.72 N Hydrochloric Acid solution drop-wise until color changes from yellow to reddish-orange.
5. Record number of drops used.

Calculation

Factor (oz/Gal) 0.30
Factor (g /L) 1.99
Concentration = # Drops of 0.72 N HCl x Factor

Waste Disposal

Discharge rinse water and spent solutions to a permitted disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities.

Caution

Cleaner 200 PWA is an alkaline product and should be handled accordingly. Avoid skin and eye contact. Wear protective clothing, goggles and gloves. Flush exposed areas immediately with clean cold water. Contact a doctor promptly in case of injury. Consult SDS for details.

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For more information on this process,
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