

**PRETREATMENT TECHNICAL DATA SHEET****A REGENERABLE ACID PICKLE****PRODUCT DESCRIPTION**

CORROSOL 888 is an acidic product used to remove metal oxides from ferrous substrates. **CORROSOL 888** is ideally suited for processes that utilize regeneration equipment to purify the pickle (remove iron from the acid) and extend pickle bath life.

TECHNICAL PROPERTIES

Composition:	Liquid
Appearance:	Clear Light Straw
Recommended Concentrations:	2-10% by volume
Recommended Temperatures:	120 ⁰ F-160 ⁰ F

PRODUCT ADVANTAGES

- Compatible with all phosphate coating systems.
- Reduces and softens scale and sludge on equipment and plumbing.
- Provides a uniform surface through the incorporation of surfactants into the product.
- Increase in effective bath life over other conventional phosphoric acid pickles.

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USE & CONTROL INSTRUCTIONS:

Operating Properties (Typical):

- Application: Immersion and spray
- Operating Concentration: 2-10% by volume for Spray
5 - 10% by volume for Immersion
- Operating temperature: 120⁰F - 160⁰F
- Operating time: Spray: 60-90 seconds
Immersion: 90-300 seconds

Charge Instructions:

CORROSOL 888 Concentration	Charge of Product per 100 gallons of tank volume
2% volume	2.0 gallons
3% volume	3.0 gallons
4% volume	4.0 gallons
5% volume	5.0 gallons
6% volume	6.0 gallons
7% volume	7.0 gallons
8% volume	8.0 gallons
9% volume	9.0 gallons
10% volume	10.0 gallons

Charge Details:

- 1) Fill the clean tank to approximately $\frac{3}{4}$ full of the operating solution with fresh water.
- 2) Slowly add the recommended amount of **CORROSOL 888** for every 100 gallons of bath volume.
- 3) Heat the tank to approximately 120⁰F-160⁰F.
- 4) Mix well and continue filling the tank to the operating level with fresh water.
- 5) Heat to operating range and analyze.
- 6) Make any concentration adjustments required and begin processing parts.

CORROSOL 888

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Analysis Procedure (Free Acid):

CAUTION: DO NOT PIPETTE BY MOUTH!

Equipment needed:

- Burette
- Beakers
- 250 ml Flask
- 10 ml. volumetric pipette w/single ml graduations
- Pipette Bulb

Reagents needed:

- Indicator: Bromophenol Blue
- Titrant: 0.1 Normal Sodium Hydroxide

Procedure:

1. Pipette 2 mls. of pickle bath into a clean, dry 250 ml flask.
2. Add 5 drops of Bromophenol Blue indicator.
3. While swirling the flask, titrate the yellow/green solution with 0.1 Normal Sodium Hydroxide until the solution turns blue.

Calculation:

mls of 0.1 Normal Sodium Hydroxide X 0.6 =
Percent Concentration of **CORROSOL 888**

Concentration % by volume	Free Acid (mL)
2.0	3.3
3.0	5.0
4.0	6.6
5.0	8.3
6.0	10
7.0	11.6
8.0	13.3
9.0	15
10.0	16.6

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Analysis Procedure (Iron):

Equipment needed:

- Burette
- Beakers
- 250 ml flask
- 10 ml. volumetric pipette
- Pipette bulb

Reagents needed:

- Indicator: 1:1 Sulfuric Acid :Phosphoric Acid
- Titrant: 0.2 Normal Potassium Permanganate

Note: Keep titrant covered to prevent oxidation by light.

Procedure:

4. Pipette 10 mls of pickle bath into a clean, dry 250 ml flask.
5. Add 5 drops of acid indicator.
6. While swirling the flask, titrate the solution with 0.2 Normal Potassium Permanganate until the solution turns pink for at least 30 seconds.

Calculation:

mls of 0.2 Normal Potassium Permanganate X 1.0 = iron g/l

Concentration g/l iron	titration (mL)
2	2
4	4
6	6
8	8
10	10

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CORROSOL 888 Replenishment:

- To increase the concentration by 1% by volume, add 1 gallon of **CORROSOL 888** for each 100 gallons of tank volume.
- To raise the concentration by 1 point of Free Acid, add 0.6 gallons (2.27 liters) of **CORROSOL 888** for each 100 gallons of tank volume.

Iron Control

Monitor iron level in the bath and use the concentration to determine when to discard the bath and recharge with fresh chemistry.

Specific process conditions determine the level of iron that requires a partial decant of the bath or a dump of the entire bath. Please consult your PPG representative.

Equipment:

All tanks and equipment for pickle stages should be constructed with 316 or 316L stainless steel, of sufficient gauge.

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PPG PRETREATMENT
23000 ST. CLAIR AVE
EUCLID OH 44117
216 486 5300
www.ppg.com