



INDUSTRIAL COATINGS

(PT52961-10)

CORROSOL 52961

LIQUID DESCALER/DERUSTER

PRODUCT DESCRIPTION

CORROSOL 52961 is an acidic liquid which when dissolved in water, effectively removes rust, scale, and metallic oxides from steel, copper, or stainless steel in spray or immersion applications. **CORROSOL 52961** is less toxic and irritating than conventional pickling agents and is easily rinsed. **CORROSOL 52961** has a high metal tolerance and will not produce conventional acid scale and sludge.

PRODUCT ADVANTAGES

- Designed to be low foaming at temperatures above 120°F for use in spray systems.
- Effectively removes rust, scale, and metal oxides
- Free rinsing

TECHNICAL PROPERTIES



Composition:	Liquid
Appearance:	Clear Straw

Odor:	Sweet
Specific Gravity:	1.12
Pound per Gallon:	9.34

Flash Point:	>200°F
Foaming Tendency:	Low
Recommended Diluent:	Water

Behavior in Hard Water:	Good
Rinsability:	Good
Biodegradable Surfactants:	N/A

Recommended Concentration:	0.5%-5%/volume
Recommended Temperatures:	Ambient - 180°F
pH (concentrate):	2.3
pH (working solution):	3.0 @ 1%/volume

USE & CONTROL INSTRUCTIONS:

Operating Properties (Typical):

- Application: Immersion or spray
- Operating Concentration: 0.5% - 5.0%/volume
- Operating temperature: Immersion: Ambient - 180°F
Spray: 120°F - 180°F
- Operating time: Immersion: 2-4 minutes
Spray: 60 seconds minimum

Specific process conditions may warrant operating the above parameters outside of the typical ranges. Please consult your PPG representative.

Charge Instructions:

Charge Details:

- 1) Fill the clean tank to approximately $\frac{3}{4}$ full of the operating solution with fresh water.
- 2) Slowly add 0.5 - 5 gallons of **CORROSOL 52961** for every 100 gallons of bath volume.
- 3) Fill the tank to the operating level with fresh water.
- 4) Heat to operating range and analyze.
- 5) Make any concentration adjustments required and begin processing parts.

Analysis Procedures:

CAUTION: DO NOT PIPETTE BY MOUTH

Total Acid:

Equipment needed:

- Burette Assembly
- 10-ml volumetric pipette and bulb
- Flask or Beaker

Reagents needed:

- Phenolphthalein
- 0.1N Sodium Hydroxide

Procedure:

1. Pipette a 10-ml sample of the operating bath into a clean, dry, flask or beaker.
2. Add 3-5 drops of Phenolphthalein. The color should not change.
3. Titrate using 0.1N Sodium Hydroxide until the solution turns pink.
4. Record the number of ml of 0.1N Sodium Hydroxide used as Total Acid.

USE & CONTROL INSTRUCTIONS:

Concentration (%/volume)	Total Acid (ml 0.1N Sodium Hydroxide)
0.5	1.8
1.0	3.5
1.5	5.2
2.0	7.0
2.5	8.8
3.0	10.6
3.5	12.4
4.0	14.2
4.5	16.0
5.0	17.8

Calculation:

MI 0.1N Sodium Hydroxide X 0.28 = %/volume concentration of **CORROSOL 52961**

Ferrous Iron:

Equipment needed:

- Burette Assembly
- 10-ml volumetric pipette and bulb
- Flask or Beaker

Reagents needed:

- 1:1 Sulfuric Acid/Phosphoric Acid
- 0.2N Potassium Permanganate

For ordering information, please refer to the Reagent Reference list available from your PPG representative.

Procedure:

1. Pipette a 10-ml sample of the operating bath into a clean, dry, flask or beaker.
2. Add 3-5 drops of 1:1 Sulfuric Acid/Phosphoric Acid. The color should not change.
3. Titrate with 0.2N Potassium Permanganate until the solution turns pink.
4. Record the number of ml of 0.2N Potassium Permanganate used directly as the Ferrous Iron concentration, in grams/Liter.

Direct Calculation:

MI 0.2N Potassium Permanganate X 1 = grams/Liter Ferrous Iron

CORROSOL 52961 Replenishment:

The addition of 1 gallon of **CORROSOL 52961** per 100 gallons operating solution will increase the concentration 1% and the Total Acid 3.6 points.

USE & CONTROL INSTRUCTIONS:

Equipment:

All tanks and equipment must be constructed of stainless steel. 316 stainless is recommended.

PRECAUTIONS:

Consult the most recent *Material Safety Data Sheets* for health and safety information relative to the safe handling and storage of this material, and all reagents and indicators used to control this material.

Emergency 24 hour CHEMTREC number: 800.424.9300