

# Phos Oil #168 Inhibitor

## Corrosion Inhibiting Emulsion Oil

zinc phosphate coatings. #168 can provide up to 240 hours of salt spray resistance when applied over coatings which are over 2,000 mg/ft2 and applied to dry phosphate coatings.

Excellent results can be achieved on lighter coating weights also. 72-96 hours is typical for standard operating processlines with 1500 - 2500 mg/ft2.

#168 is a stable emulsion and resistant to degradation. Providing an emulsion in water that coats surfaces evenly. #168 is approved and meets requirements of FCA (DCX /Chrysler) spec PS.50034 ( formerly PS-80), GM 4435, Ford S-2 and other specifications. Meets Torque Tension requirements of .08-.14.

## Features & Benefits

- Dilutes with water providing a low cost system.
- Low oil residue, without tackiness. Ideal for parts with torque tension requirements.
- Stable emulsion when good rinsing procedures are used.
- Meets various automotive and government specifications for corrosion resistance.
- Provides extended corrosion resistance over zinc phosphate coatings of up to 200+ hours in salt spray.

## Physical Data

|                         |                         |
|-------------------------|-------------------------|
| pH                      | 9+                      |
| Product Type            | Oil                     |
| Spec. Gravity           | .92                     |
| lbs./gal.               | 7.67                    |
| Foam, 0 = Low, 9 = High |                         |
| Shelf-Life Years        | 10 years                |
| Freeze Information      | Not damaged by freezing |

## Product Bulletin

Product Name: Phos Oil #168 Inhibitor  
Product Code: 2503907  
Revision Date: October 23, 2025

### Typical Processing

- 1. Wash, Rinse, Acid Pickle, Zinc Phosphate Coating, Etc.
- 2. Rinse
- 3. Rinse, (neutralize to ph of 8.0 to 10.0 if necessary), see POLY FILM 2555
- 4. #168 Oil, 10-20% by volume, 1-5 minutes. , ph= 9.0 - 10.0 (Double dip tightly packed parts or over filled barrels- or more)  
Note: Do not drag acid/s salts, dirty rinse water or alkali into bath.

Note: To control ph: PH controller phc 20, Triethanolamine, or Monoethanolamine to raise ph. Agitation necessary with new bath or bath recharge. Continuous agitation suggested for optimal performance.

### Packaging

|                |                      |
|----------------|----------------------|
| Container Type | Steel                |
| Net Units      | 450                  |
| Tare Wt.       | 25                   |
| Gross Wt.      | 447                  |
| DOT_Name       | Not regulated by DOT |
| DOT Hazard     | Not regulated by DOT |
| Tarriфф ID     | 3403.11              |

### Use Parameters

|                     |                     |
|---------------------|---------------------|
| Concentration Range | 10% - 20% by volume |
| Temperature Range   | 80 – 150 deg. F.    |
| Time Range          | Dip 1 – 5 minutes   |
| Agitation           | Mild recommended    |

### Waste Disposal

Neutralize pH, remove fats, oils, grease and heavy metals

### Holding Tank Materials of Construction

Steel, Stainless or Poly

## Other Information

It is important that the OSHA DATA, "Material Safety Data Sheet" be carefully read and reviewed with the users of this product. OSHA data is required to be posted in the work area by law

## Testing Operating & Troubleshooting Data

### Ph

Maintain 9.0 - 10.5 Use **Ph Adjuster 45 To Increase, (Aka: Booster 45 )**,

### Refractometer

# = % By Volume Direct Reading (= Best Practice) Older Baths Can Be Difficult to Read.

### Acid Split % Concentration

- 1) Transfer 50 Mls into a Graduated Cylinder
- 2) Add 25 Mls of Hydrochloric Acid Or 50% Sulfuric Acid. Stir & Mix Well....
- 3) Allow 1/2 - 12 Hours for Solid Oil Float to Form.
- 4) The Number of Mls of Solid Oily Fluid Times 2 = % Concentration.

Note: It Is Important That the Split Floating Layer Is Solid Oil. In Some Cases An Opaque Appearance Indicates Entrapped Sludge or Water in the Layer. It Should Look Like Motor Oil.

Note: Heating The Cylinder to The Top in a Water Bath Greatly Enhances the

Procedure Shortens the Time Significantly.

12/06: A Smaller Sample Size Can Be Used to Achieve Equivalent Results. Example Being:

- A) Add 15 Mls of Emulsion into Graduated Cylinder,
- B) Add 35 Mls of Water
- C) Add 50 Mls Of 50% Sulfuric Acid or Hydrochloric Acid.
- D) Allow To Set For 30 Minutes +, Read Mls of Oily Layer and Multiply By 6.7 = % By Volume.

Note: Heating The Cylinder to the Top In A Water Bath Greatly

Enhances the Procedure Shortens the Time Significantly.

**Emulsion Stability Issues:** The Use of Emulsion Stabilizer #61 Will Improve the Stability in Harsh Operating Conditions

### Operating Notes & Corrective Action Emulsion Stability:

- A) When Agitating Use a Slow Air Operated Mixer If Available. Air May Be Used but Try to Maintain a Low Level. Turn Air Off During Non-production Times.
- B) It Is Preferred to Make Small Frequent Additions to the Tank Rather Than Large Infrequent Adds.
- C) Remove Any Floating Debris.
- D) Decant And Remove Mud and Solids Which May Accumulate In the Bottom. This is Very Common and Should Be Done Frequently to Maintain Maximum Quality.

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- 1) When Adding Ph Control Is Best to Predilute in Water at About 5 Parts To 10 Parts Water (Ph Controller Phc-20 Ros 1-12015)
- 2) Add The Ph Adjuster At 1/2 The Rate As Determined to Assure You Do Not Over Add Causing The Ph To Go Over the Recommended Range.....ph Controller Phc-20 (1-2015 Ros)
- 3) Butyl Cellosolve ( Eb Solvent) Is Used as Coupling Agent In This Product. If A Tank Is Run At Higher Than Normal Temperatures For Extended Periods of Time or Is Vigorously Agitated with Air Small Additions (Re: L Liter - Quart Per 500 Gals) Of The Solvent May Be Required Due To Evaporation.  
Bench Test In the Lab the Amount That May Be Needed or If Necessary.  
Ph Adjustments and Required Additions of Fresh Product Should Be Made Prior To Adding Solvent.
- 4) For Best Results, Periodic Chloride Checks Should Be Performed. Target < 500 Ppm

Updated: 12-09 Ros

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