



Technical Process Bulletin

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METALPREP® 79

Cleaning and Conditioning Chemical

1. Introduction:

METALPREP 79 is a non-flammable multi-purpose phosphoric acid based cleaner and prepaint conditioner for most metals. METALPREP 79 cleaning and conditioning chemical leaves the surface chemically clean and corrosion free.

METALPREP 79 can be used to deep clean and etch a metal surface prior to paint or to prepare a surface for a subsequent chemical coating like that produced by GALVAPREP® SG on zinc and steel or ALODINE® 1201 on aluminum surfaces. Chemical coatings offer the best affordable substrate for both paint adhesion and underpaint corrosion resistance.

2. Operating Summary:

Brush Application:

For light oxidation and corrosion removal, dilute one part METALPREP 79 with two parts water.

For heavy oxidation and corrosion removal, dilute one part METALPREP 79 with one part water.

Immersion Application:

For each 100 parts of bath, add 25 parts METALPREP 79 to 75 parts of water.

Spray Application using 62-G Applicator:

Set dilution control on 3, allowing a mix of three parts water to one part METALPREP 79.

3. Process Sequence:

To clean and condition metal:

Step No. 1 - Apply the diluted METALPREP 79

Step No. 2 - Allow the solution to react

Step No. 3 - Thoroughly rinse with water

Step No. 4 - Dry

To prepare the metal for a chemical coating:

- Step No. 1 - Apply the diluted METALPREP 79
- Step No. 2 - Allow the dilution to react
- Step No. 3 - Thoroughly rinse with water
- Step No. 4 - Apply coating chemical per product instructions
- Step No. 5 - Thoroughly rinse with water
- Step No. 6 - Dry

The work, after processing and drying, is ready to be painted.

4. Equipment:

Acid-resisting (rubber, stainless steel, or plastic) buckets, troughs, or other suitable container should be used to hold the diluted METALPREP 79 cleaning and conditioning chemical solution. Ordinary steel pails may be used for a short period. Galvanized containers should not be used. If production conditions warrant, troughs may be installed to catch the METALPREP 79 cleaning and conditioning cleaner run-off for reuse.

Long-handled, window-type brushes, clean cloths, or synthetic sponges may be used to brush on the METALPREP 79 cleaning and conditioning solution.

5. Application:

Selecting the size area to be treated at one time will depend on method of application, condition on the metal surface, temperature, chemical dilution and part configuration. A typical treatment time is where METALPREP 79 is in contact with metal surface between one and two minutes. The METALPREP 79 should not be allowed to dry on the metal surface or permitted to reoxidize prior to a thorough rinse.

METALPREP 79 is normally applied at temperatures between room and 120° Fahrenheit. Enough temperature to clean within two minutes time without drying is optional. If drying does occur, rewet with the diluted METALPREP 79, prior to water rinsing.

A thorough rinse with clean water is necessary to remove both residual METALPREP 79 cleaning and conditioning chemicals and oils that have been lifted from the metal surface.

6. Pointers:

Good results start with cleaning. A clean surface is a "water break-free surface". The rinse water sheets out over the metal surface where oil will cause water to bead up. Chemical cleaners will lift and break down oils on the surface of the metal and assist in rinsing them from the surface of the metal.

Corrosion is generally the result of a chemical battery reacting on the metal surface. In the presence of moisture, this corrosion can grow out over the metal surface. METALPREP 79 cleaning and conditioning chemicals attack the surface oxides and the corrosion battery. The result of this attack is either the corrosion battery being removed or deactivated.

Blushing or yellowing on steel is often seen when using METALPREP 79 solution. This chemical reaction is not injurious to quality, provided it is not rust or pits.

Blistering and corrosion problems are often the results of poor rinsing. Salts and soils trapped under a paint film eventually lead to problems.

To aid in the removal of heavy oxidation or corrosion, heating and/or applying the METALPREP 79 cleaning and conditioning chemical with an abrasive pad will shorten the treatment time. Scotch-brite pads are often used.

METALPREP 79 should not be used on a sand blasted part because rust will form instantaneously. The rust, then formed, is harmful to quality.

Paint soon after the work is dry in order to prevent soils or rust from contaminating the prepared metal surface.

To avoid streaks and patterns work from bottom to top.

7. Storage Requirements:

METALPREP 79 cleaning and conditioning chemical will freeze at 14° Fahrenheit. It is recommended that the product be kept from freezing. However, should it freeze, simply thaw it in a warm place and stir it prior to use.

8. Waste Disposal Information:

Applicable regulations covering disposal and discharge of chemicals should be consulted and followed.

Disposal information for METALPREP 79 is given on the Material Safety Data Sheet for the product.

The processing bath is acidic and contains phosphates. Waste treatment and neutralization may be required prior to discharge to sewer.

9. Precautionary Information:

Before handling the product, the first aid and handling recommendations found in the Material Safety Data Sheet should be read and followed.

The processing bath is acidic. Do not get in eyes, on skin or on clothing. In case of contact, follow the recommendations found in the Material Safety Data Sheet for METALPREP 79.

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