#### DX501 / DX503 / DX520 / DX533 / DX579

## DX Metal Treatments

PPG **DX Metal Treatments** are specifically designed to clean, condition and fortify metal substrates for maximum adhesion and corrosion resistance.

#### **DX579: Metal Cleaner**

DX579 is a multi-purpose phosphoric acid based cleaner and prepaint conditioner for most metals. It can be used to deep clean a metal surface prior to paint or to prepare a surface for a subsequent chemical conversion coating (when followed by DX520 or DX501). DX579 is blue in color and could lighten over time.

#### **DX520: Metal Conditioner**

DX520 is a phosphoric acid based conditioner that will deposit a uniform layer of zinc phosphate on properly prepared galvanized and steel surfaces. DX520 is intended as the second step in a two step process, following DX579 application. DX520 is pale green in color and may turn darker over time.

### **DX533: Aluminum Cleaner**

DX 533 is a phosphoric acid based cleaner, brightener and prepaint conditioner for aluminum substrates. It is used to deep clean and brighten an aluminum surface prior to welding & painting, or as the first step in a two part process to prepare the surface for a subsequent application of chemical conditioner DX503. DX533 is clear in color.

#### **DX503: Aluminum Conditioner**

DX503 is a chromic acid based conditioner that will form a chrome conversion layer on aluminum and its alloys when applied after a DX533 cleaning step. The conversion coating formed by DX503 is gold to tan and becomes a part of the aluminum surface. DX503 is medium orange in color and may darken over time.

#### **DX501: Aluminum Conditioner**

DX501 is also chromic acid based but the conversion layer formed is clear in color, also intended to applied after the DX579 cleaning step. It is used when it is desirable to retain the aluminum substrate's silver white finish, either unpainted or with a clear coating applied over the treated metal. Dilution of DX501 with hot water may change the color of the mixture and the resulting chemical conversion layer to a darker shade similar to DX503. DX501 is light orange in color.

**NOTES:** If the intended coating process includes spray applying **Wash Primers** (also known as etch primers or pretreatment coatings) to properly sanded and cleaned bare metal substrates, DX Metal Treatments in any combination are not required or advisable.

DX Metal Treatments are not recommended or advisable on sandblasted metal.

Consult MSDS for hazardous ingredient content. Drippings and run-off of the product may be hazardous, (DX501 and DX503 run-off will always be considered hazardous); check with local Municipality (POTW) before allowing runoff or rinse waters to go to sewer.



# Metal Treatments

#### **Directions for Use**

**APPLICATION:** Use the steps below to condition and refinish metals for maximum paint adhesion and corrosion resistance. Abrade the bare metal surface and remove all contaminants (including surface rust) before Step #1.

| METAL  | STEP #1   | STEP #2   |
|--|---|---|
| Iron ( no cast iron)<br>Steel<br>Galvanized<br>Galvaneal | Apply Metal Cleaner (DX579) mixed 1:2 with water. Allow to react 2-3 minutes, then rinse. Water should sheet over entire surface. For Galvanized or Galvaneal, use abrasive pad while applying. | Apply Metal Conditioner (DX520) straight from the container. Allow to react 1-2 minutes, then rinse well and dry. For Galvanized or Galvaneal use an abrasive pad. Prime with DPLF Epoxy Primer in the same day.                  |
| Aluminum   | Apply Aluminum Cleaner (DX533) mixed 1:3 with water. Allow to react 2-3 minutes and rinse well. Rinse water should sheet over entire surface.   | For painted finish, apply Aluminum Conditioner (DX503) straight from the container. Allow to react 1-3 minutes until a golden or tan color appears. Rinse well with water and dry. Prime with DPLF Epoxy Primer in the same day.  |
| Brass<br>Copper<br>Aluminum: to be clearcoated           | Apply Metal Cleaner (DX579) mixed 1:10 with cold water. Check a small spot first to be sure it does not discolor aluminum. Work from the bottom up.   | For clear finish, apply Aluminum Conditioner (DX501) mixed 1:1 with cold water and allow to react 1-3 minutes, then rinse well and dry. Do not overapply, can yellow metal surface. Apply clearcoat DAU 75 where VOC rules allow. |
| Chrome<br>Nickel<br>Stainless Steel                      | Apply Aluminum Cleaner (DX533) and scour with an abrasive pad. Rinse well with water and dry.  Apply DPLF Epoxy Primer.   |   |
| Magnesium  | No Recommendation   |   |
| Anodized Aluminum  | No Recommendation   |   |
| Lead   | Wash with a 1:1:1 (ammonia: alcohol: water) mixture. Apply DPLF Epoxy Primer.   |   |

- **NOTES:** 1. Read the printed instructions on the container prior to use.
  - 2. For optimal results keep metal surface saturated/wet with DX metal treatment until rinse.
  - 3. For optimal results with Metal Cleaner DX579 or Aluminum Cleaner DX533, apply chemicals with acid resistant brush or synthetic abrasive pad (i.e. Ultra Fine Scotchbrite).
  - 4 When treating galvanized or galvaneal metal, always use an abrasive pad.
  - 5. Products contain acids and in several cases heavy metal compounds. Run-off residues may not be allowed in local sewer discharge may have to be captured and special disposal steps required. Consult local sewer authority to determine correct disposal procedures.

## Metal Treatments

### **Technical Data**

| Product: | Blend Ratio:    | VOC Actual (or VOC Content) | VOC Regulatory (or VOC Less Water Less Exempts) |
|----------|-----------------|-----------------------------|---|
| DX501    | 1:1 with water  | 0.0 lbs/gal (0 g/L)         | 0.0 lbs/gal (0 g/L)                             |
| DX503    | as is           | 0.0 lbs/gal (0 g/L)         | 0.0 lbs/gal (0 g/L)                             |
| DX520    | as is           | 0.0 lbs/gal (0 g/L)         | 0.0 lbs/gal (0 g/L)                             |
| DX533    | 1:3 with water  | 0.23 lbs/gal (28 g/L)       | 4.20 lbs/gal (503 g/L)                          |
| DX579    | 1:2 with water  | 0.64 lbs/gal (77 g/L)       | 4.43 lbs/gal (531 g/L)                          |
| DX579    | 1:10 with water | 0.17 lbs/gal (20 g/L)       | 4.43 lbs/gal (531 g/L)                          |

**Important:** The contents of this package must be blended with other components before the product can be used. Before opening the packages, be sure you understand the warning messages on the labels of all components, since the mixture will have the hazards of all its parts. Improper application technique may result in a hazardous condition. Follow TDS & MSDS instructions to prevent personal injury. Several products contain acids and heavy metal compounds that will require appropriate worker PPE. Follow directions for respirator use. Wear eye and skin protection. Observe all applicable precautions.

#### See Material Safety Data Sheet and Labels for additional safety information and handling instructions.

#### EMERGENCY MEDICAL OR SPILL CONTROL INFORMATION (412) 434-4515; IN CANADA (514) 645-1320

Materials described are designed for application by professional, trained personnel using proper equipment and are not intended for sale to the public. Products mentioned may be hazardous and should only be used according to directions, while observing precautions and warning statements listed on label. Statements and methods described are based upon the best information and practices known to PPG Industries. Procedures for applications mentioned are suggestions only and are not to be construed as representations or warranties as to performance, results, or fitness for any intended use, nor does PPG Industries warrant freedom from patent infringement in the use of any formula or process set forth herein.

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