Acheson
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# Product Data Sheet

## Emralon® 330

### Heat-cured solvent borne fluoropolymer lubricant coating

## DESCRIPTION

A coating of **Emralon 330** offers clean, dry, long lasting, solvent resistant lubrication for sliding, rubbing or rolling surfaces. **Emralon 330** is a resin-bonded PTFE lubricant supplied as one component in ready-for-use form. Its low temperature cure of 150°C (300°F) does not affect heat-sensitive substrates such as light metals, wood, rubber and some plastics. The extremely thin coating of **Emralon 330** necessary to achieve maximum lubrication (from 0.0003 to 0.0007 inch, or 0.008 to 0.018 millimeter) allows post-treatment of parts while maintaining original part dimensions without redesign. In many cases, an **Emralon 330** coating can replace metal plating or finishing and offers improved performance at lower cost.

| FEATURES | BENEFITS |
|---|---|
| • Satiny finish | • Attractive component appearance to secure customer satisfaction |
| • Low coefficient of friction | • Ability to meet lubrication requirements for the component |
| • Remains flexible over a wide range of temperatures | • Application for a variety of environmental performance requirements |
| • Good release properties with a low coefficient of friction | • Ability to meet lubrication and assembly requirements for the component and application |
| • Consistent and uniform dip spin or spray application performance | • Versatile application techniques to minimize operation costs |
| • Resistant to a variety of oil and solvents | • Ability to design into a variety of component applications with differing environmental exposure needs |

## TYPICAL APPLICATIONS

- Fasteners
- Sliding Rails
- Lock mechanisms
- Seat belt components
- Latches
- Mechanisms

## TYPICAL PROPERTIES
(of wet product)

| | | |
|---|---|---|
| Color | : | light blue |
| Pigment | : | PTFE |
| Binder | : | thermoset |
| Carrier | : | MEK or Acheson SB-2 solvent |
| Diluent | : | MEK or Acheson SB-2 solvent |
| Consistency | : | liquid |
| Viscosity | : | 60 – 150 mPa·s |
| Density | : | 0.96 kg/l (8.90 lb/gal) |
| Solids content by weight | : | ~ 25% |
| Flash point | : | 10°C (50°F) |
| VOC | : | 715.0 g/l (6.0 lb/gal) |
| Theoretical coverage | : | 6.81 $m^2$/kg @ 25 μm (266 $ft^2$/gal @ 1 mil) dry film thickness |

## TYPICAL PROPERTIES
(as cured)

| | | |
|---|---|---|
| Color | : | green |
| Coefficient of friction | : | 0.05 – 0.07 static |
| Service temperature | | |
| -continuous | : | 130°C (275°F) |
| Salt spray resistance* | : | > 46 hours over zinc phosphated surface, 25 micron film thickness; up to 200 hours with appropriate substrate pre-treatment |

## METHOD OF USE

**Surface Preparation**

For maximum resistance to wear, corrosion and abrasion, the following procedures are recommended:

Steel: Degrease, grit blast, and/or chemically pretreat with Detrex 10482, Granodine 203, Lubrite 23, or equivalent.

Stainless Steel: Degrease grit blast or use Granodraw SS3.

Aluminum: Degrease, pre-treat with Alodine1200S3 or equivalent, anodize.

**Mixing**

**Emralon 330** can be spray applied undiluted. However, to obtain maximum smoothness, dilute the product with Methyl Ethyl Ketone (MEK) or Acheson solvent SB-2 in the ratio of three parts product (by weight) to one part solvent. If parts are to be dipped, a 3:2 (product:solvent) weight ratio is recommended. If dip-spin equipment is used, adjust the product to 20-30 seconds on a #2 Zahn cup (neat product may already be in this range).

**Application**

Use an external-atomizing spray gun with 35 to 50 psi air pressure and adjust the gun to give a well-atomized spray. For optimum performance, the final coating thickness should be 0.0003-0.0010 inches (0.008 to 0.025 millimeters). When properly applied, the coating will be even and free of runs, blisters, or “fish eyes.” Some electrostatic spray systems may be used to apply **Emralon 330**. Contact our Specialty Coatings Business Group’s Technical Service Department for details.

**Emralon 330** can also be applied by dipping. The product should be diluted 3:2 (product:solvent) by weight with MEK. The average dip coating will produce a heavier coat, but a pre-cure of ten minutes at 121° to 135°C (250° to 275°F) or one minute at 177°C (350°F) is required between dips. Dip-spin will require two or three coats. A partial cure of one minute at 177°C (350°F) is required between coats.

**Curing**

**Emralon 330** must be air-dried to the touch (2-5 minutes) before being placed in the curing oven. For optimum corrosion and wear resistance, cure the coating for one hour at 160°C (325°F) in an air-circulating oven or under infrared lamps. Acceptable cure cycles include one hour at 150°C (300°F), 10 minutes at 175°C (350°F), 8 minutes at 204°C (400°F), or 5 minutes at 260°C (500°F). Note that as cure temperature increases, cure time becomes more critical. Degree of cure may be monitored by the color of the coating. As the cure progresses, the coating will gradually change in color from light blue to dark green. Cured coatings can only be removed by sandblasting or applying strong caustic solutions.

## STORAGE/ HANDLING

Keep container tightly closed when not in use. Store in a cool, well ventilated area. Keep away from heat, sparks, and open flame. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

## APPLICATION ASSISTANCE

Acheson’s Application Specialists are available to assist you in production start-up with **Emralon 330**. Visit our website www.achesonindustries.com for more information and for the Acheson global location nearest you.

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|---|---|
| **HEALTH & SAFETY** | Please consult Material Safety Data Sheet |
| **NOTES** | Emralon® is a registered trademark of Acheson Industries Inc. |


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