



Product Data Sheet

Emralon[®] GP-1904

Heat-cured solvent borne fluoropolymer lubricant coating

DESCRIPTION

Emralon[®] GP-1904 is a dispersion of PTFE and graphite in a thermosetting binder designed to be applied by spray, brush, or dip. **Emralon[®] GP-1904** produces a low friction coating with excellent resistance to corrosion and solvents. The wide range of cure temperatures 149° to 260°C (300° to 500°F) allows **Emralon[®] GP-1904** to be used on wood, rubber and many plastics and on engineering metals. **Emralon[®] GP-1904** is a one-package product and is not affected by low temperature storage conditions.

FEATURES	BENEFITS
<ul style="list-style-type: none">Satiny finish	<ul style="list-style-type: none">Attractive component appearance to secure customer satisfaction
<ul style="list-style-type: none">Low coefficient of friction	<ul style="list-style-type: none">Ability to meet lubrication requirements for the component
<ul style="list-style-type: none">Remains flexible over a wide range of temperatures	<ul style="list-style-type: none">Application for a variety of environmental performance requirements
<ul style="list-style-type: none">Good release properties with a low coefficient of friction	<ul style="list-style-type: none">Ability to meet lubrication and assembly requirements for the component and application
<ul style="list-style-type: none">Consistent and uniform dip spin or spray application performance	<ul style="list-style-type: none">Versatile application techniques to minimize operation costs for application

TYPICAL APPLICATIONS

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

TYPICAL PROPERTIES (of wet product)

Color	: black
Pigment	: PTFE and graphite
Binder	: thermoset
Carrier	: MEK or Acheson SB-2 solvent
Diluent	: MEK or Acheson SB-2 solvent
Consistency	: liquid
Viscosity	: 100 mPa-s
Density	: 0.96 kg/l (8.0 lb/gal)
Solids content by weight	: 25%
Flash point	: 8°C (46°F)
VOC	: 720.0 g/l (6.0 lb/gal)
Theoretical coverage	: 6.81 m ² /kg @ 25 μm (266 ft ² /gal @ 1mil) dry film thickness

TYPICAL PROPERTIES (as cured)

Color	: black
Coefficient of friction	: 0.08 – 0.10 static
Service temperature	
-continuous	: 149°C (300°F)
Salt spray resistance (ASTM B 117)	: >96 hours over zinc phosphated surface, 25 micron film thickness

METHOD OF USE

Surface Preparation

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

- Steel: Degrease, grit blast, and/or chemically pre-treat with Detrex 10482, Granodine 203, Lubrite 23, or equivalent
- Stainless Steel: Degrease grit blast or use Granodraw SS3
- Aluminum: Degrease, pre-treat with Alodine 1200S3 or equivalent, anodize

Mixing

Emralon® GP-1904 can be spray applied undiluted. However to obtain maximum smoothness, dilute the product with Methyl Ethyl Ketone (MEK) or Henkel 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 35-50 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® GP-1904**. Contact Henkel's Technical Finishes Department for details. **Emralon® GP-1904** 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

For optimum results, **Emralon® GP-1904** should be cured at 149°C (300°F) for 60 minutes, 177°C (350°F) for 10 minutes, or 204°C (400°F) for 8 minutes (substrate temperatures).

STORAGE/ HANDLING

Keep from freezing. 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

Henkel's Application Specialists are available to assist you in production start-up with **Emralon® GP-1904**. Visit our website www.henkelna.com/metals for more information and for the Henkel global location nearest you.

HEALTH & SAFETY

Please consult Material Safety Data Sheet.

NOTES

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Henkel
32100 Stephenson Highway
Madison Heights, MI 48071
866.332.7024

