

Information About Dow Corning® 92-009 Dispersion Coating

Type

Air-drying, one-part silicone material

Physical Form

– **As Supplied**

35% silicone solids dispersed in hydrocarbon solvent

– **As Cured**

Tough, transparent silicone rubber coating

Cure

72 hours at 25°C (77°F) and 50% relative humidity

Special Properties

High tear; excellent adhesion, release, and anti-abrasion characteristics

Primary Uses

Environmental sealing/ protection for various parts and substrates

Methods of Application

Brush, dip, pour, spray

DESCRIPTION

Dow Corning® 92-009 Dispersion Coating is a single component, room temperature curing silicone rubber material. The coating is easily applied by brushing, dipping, pouring, or spraying, and cures within 72 hours to a tough, transparent, rubbery film. Similar to other *Dow Corning* silicones, *Dow Corning* 92-009 Dispersion Coating resists weathering, ozone, chemicals, moisture, ice, and ultra-violet radiation at temperatures up to 260°C (500°F). Additional features include:

- Excellent adhesion
- Excellent release properties

USES

Dow Corning 92-009 Dispersion Coating is a highly versatile material used to protect various parts and substrates on missiles, rockets, aircraft, and launch equipment from corroding and eroding. The coating has also been successfully applied to electrical and steel cables; fuel transfer lines; structural members and undersides

of aircraft; engine cases and struts; fan blades used in wind tunnels; and radar antennae.

Dow Corning 92-009 Dispersion Coating can be readily pigmented and applied as paint to mark, identify, or color-code various materials or parts – including those made of silicone rubber. When pigmented with white zinc oxide or titanium dioxide, this product also makes an effective thermal control coating for protecting vehicles orbiting in space.

HOW TO USE

Surface Preparation

In most cases, substantially stronger and more uniform adhesion is obtained by preparing the surface to be treated with *Dow Corning*® 1200 Prime Coat. The following steps are recommended for all surfaces except silicone rubber. (Silicone rubber surfaces should be roughened with sandpaper and then cleaned with acetone before applying the coating.)

1. Thoroughly clean and degrease the surface.

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

As Supplied

| | | |
|-----------------------|-------------------------------|-------------|
| CTM ¹ 0176 | Color | Translucent |
| CTM 0021A | Flash Point, degrees | 18°C (65°F) |
| CTM 0050 | Viscosity, poise | 82 |
| CTM 0095 | Tack-Free Time, minutes | 40 |

As Cured

| | | |
|------------|--|------------------------|
| CTM 0022 | Specific Gravity | 1.11 |
| | Adhesion, 2024 Aluminum (primed) | Excellent |
| ASTM D 412 | Tensile Strength, psi | 1300 |
| ASTM D 412 | Elongation, percent | 680 |
| ASTM D 624 | Tear Strength, Die B, ppi | 180 |
| ASTM D 676 | Durometer Hardness, | |
| | Shore A Scale, points | 46 |
| CTM 0249 | Volume Resistivity, ohm-cm | 5.4 x 10 ¹⁴ |
| CTM 0224 | Thermal Conductivity, Btu-in/ft ² hour °F | 1.26 |

¹ CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

Specification Writers: Please obtain a copy of the Dow Corning Sales Specification for this product and use it as a basis for your specifications. It may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call (517) 496-6000.

2. Rinse all cleaning agents off surface with acetone or methyl ethyl ketone.
3. After rinse agent has dried, apply a coat of *Dow Corning* 1200 Prime Coat by dipping, brushing, or spraying. Typically, a very thin coating of primer will provide the best adhesion. If cracks appear in the chalked film, too much primer was applied.
4. Under typical room temperature and humidity conditions, the primer should be allowed to air-dry for 60 to 90 minutes. Because the prime coat is moisture sensitive, low humidity will necessitate a longer drying time.
5. Apply *Dow Corning* 92-009 Dispersion Coating.

APPLICATION

Dow Corning 92-009 Dispersion Coating can be applied by brushing, dipping, or pouring as supplied. If spraying is the preferred application method, the coating can be thinned with naphtha to any viscosity necessary for use with the intended spray equipment (see Mixing Recommendations). As supplied, the average build per coat is 5 to 6 mils.

For the smoothest coat, the following procedure is recommended:

1. Dilute the coating using a 1.3 to 1 ratio of naphtha to coating by volume (1 to 1 by weight).
2. Apply four passes in rapid succession per coat.
3. If extra buildup is desired, apply successive coats within 30 minutes after the preceding coat was applied. If this is not possible, allow the coated surface to air-dry four hours before applying the next coat.

Thicker coatings may also be achieved by using less naphtha; however, a rougher surface may result.

Pigmentation

Dow Corning 92-009 Dispersion Coating is easily pigmented for applications requiring color. To obtain good coverage, the pigment should comprise at least 3 percent of the total formulation by weight. When pigmenting the coating white, zinc oxide or titanium dioxide is recommended. Using the smallest available particle size will minimize settling problems. For other colors, silicone color concentrates – pigment dispersed in a silicone oil to form a paste material – provide the easiest application with the best results. Only two parts per 100 are required (see Mixing Recommendations).

Mixing Recommendations

Any solvent or pigment added to *Dow Corning* 92-009 Dispersion Coating must be free of moisture to prevent premature gellation. This can be accomplished by adding the solvent or filler to the coating and rolling the combination in a closed container until thoroughly mixed, or by mixing in a commercial paint shaker. Zinc oxide or titanium dioxide should be dried 24 hours at 200°C (392°F) in trays before adding it to the coating.

LIMITATIONS

Not intended for medical use.

SHIPPING LIMITATIONS

DOT Classification: Flammable.

STORAGE AND SHELF LIFE

When stored below 32°C (90°F) in closed containers, *Dow Corning* 92-009 Dispersion Coating has a shelf life of 9 months from date of manufacture.

PACKAGING

Dow Corning 92-009 Dispersion Coating is available in 12-oz, 6.5-, and 32-lb (340-g, 3.0-, and 14.4-kg) containers, net weight.

SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING (517) 496-6000.

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