



SOS Series 599-B4540 | Product Data Sheet

SERIES 599-B4540 (B3740 High Solids) is a sprayable hybrid conductive coating for use on plastic substrates. It is unique in that it is formulated in **very mild solvents** that can tolerate higher built-in stresses which can be found in molded parts, and provides effective shielding at 0.5 mil (12.5 microns) dry film thickness. It dries to a conductive film that is extremely hard, tough and durable. **599-B4540 (B3740 High Solids)** contains no methyl ethyl ketone (MEK) or other strong solvents which can attack solvent-sensitive substrates, such as polycarbonate and polycarbonate blends. 599-B4540 (B3740 High Solids) is supplied as a concentrate. It is a fast drying solvent-base product for use in high volume production environments.

OUTSTANDING CHARACTERISTICS:

- ▶ Compatible with sensitive plastics because of mild solvents.
- ▶ Effective shielding at 0.5 mil (12.5 microns) dry film.
- ▶ Passes U.L. requirements.
- ▶ Excellent film cohesion.
- ▶ "Zero tolerance" for loose particles in the film.
- ▶ Excellent adhesion to most plastic substrates.
- ▶ Excellent abrasion resistance.
- ▶ Supplied as a viscous liquid for reduced settling.
- ▶ Minimal overspray and dusting during application.
- ▶ No rub-off due to handling.
- ▶ Fast drying.
- ▶ Passes ASTM D-3359-97 adhesion test.

Other products in the S.O.S. Series are 599-B3730 (Silver) and 599-B3755 (silver-coated Copper).

Percent Solids:	47 ± 2.0% by weight.
Density:	11.5 ± .5 lbs. per gallon.
Viscosity : (as supplied)	Thixotropic mixture. 50 KU minimum.
Dilution:	1:1 by volume.
Application	See attached dilution instructions.
Viscosity:	
Resistivity:	Less than .015 ohm/square per .5 mil (12.5 microns) dry film.
Environmental Testing:	No change in resistivity after 7-day exposure to 85°C. @ 85% R.H.
RCA Abrader:	Pass 500+ cycles @ 1 mil dry with 55 gram weight.
Coverage:	416 square feet per gallon per .5 mil (12.5 microns) dry film.
Mask Cleaning:	Use Challenge 485S @ 16 oz./gallon @ 180-185°F. @ 70 psi pump pressure. If necessary, use Challenge 1052 as a defoamer.
Shelf Life:	Nine (9) months from date of manufacture.
Craze Test:	In most applications, some degree of stress is inevitable. For this reason, a minimum "critical stress" value of 2000 psi was chosen as criteria for compatibility with polycarbonate, i.e. a compatible formulation is one which induces no crazing or cracking at stresses below 2000 psi.

1. Pass - 10 minute immersion at 2000 psi stressed injection molded clear polycarbonate resin bars.
2. Pass - spray applied to 2000 psi stressed injection molded clear polycarbonate resin bars dried at room temperature.
3. Pass - spray applied to 2000 psi stressed injection molded clear polycarbonate resin bars dried at a graduated temperature ranging from room temperature to 160° F. over 10 minutes.

Although **599-B4540 (B3740 High Solids)** is formulated in mild solvents, the user must test the compatibility on the actual molded parts to determine its suitability for any specific application.

NOTE: 599-B4540 (B3740 High Solids) dries rapidly. Keep container closed. If skins develop, do not attempt to dissolve - strain through a coarse filter. Clean equipment after each use. Ethyl alcohol can be used to clean equipment. If strong solvents are used, flush the system with ethyl alcohol before use.

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