

C-SHIELD™ 685 Paint for PIM mitigation and RF shielding

Preliminary

Description

PPG C-SHIELD™ 685 is an acrylic based carbon loaded paint for Passive Intermodulation (PIM) mitigation and shielding purposes.

Material is suitable for outdoor and indoor applications. High water and corrosion resistance. UV-A and UV-B resistance.

Excellent performance in PIM reduction.

Excellent shielding performance against microwave and RF energy.

Good adhesion to many surfaces and substrates.

Availability

Available in 1 Gallon containers. Other sizes are available upon request.

Instructions for use

Thorough mechanical mixing of the paint should occur prior to application. Settling of the paint is normal if left undisturbed for several days, but disperses again readily with mechanical mixing.

PPG C-SHIELD™-685 paint can be easily applied using a paint brush or a roller. Also, it can be sprayed using the proper equipment. A minimum of two coats of paint is recommended to achieve desired electrical properties. Allow paint to fully dry between coats. Thinning of the paint is not advisable as it may reduce shielding effectiveness, however, if necessary, can be done using water.

RF Properties

Radiated PIM performance, IEC 62037-8, near field test, near field test, static, 700 MHz, 1900 MHz	IM3< -100 dBm with 2x 20W test tones
PIM reduction, 10 mil (1 coat)	> 40 dB typical
PIM reduction, 20 mil (2 coats)	> 50 dB typical
RF Shielding, 10 mil (1 coat)	- 44 dB typical
RF Shielding, 20 mil (2 coats)	- 55 dB typical

Typical properties

Color:	Black
Max service temp:	+65C (+149F)
Viscosity:	14000 cPs
Coverage area per gallon:	165 sq. ft. @ 10mil layer
Surface resistivity:	15 ohm/sq @ 2 mil thickness
Density:	1.2 gram/cc

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Cuming Microwave Corporation

Engineered Materials
264 Bodwell Street
Avon, MA 02322
Telephone +1 (508) 521-6700
Fax +1 (508) 584-2309
www.cumingmicrowave.com
Made in the USA
Issue Date: 10/24
Supersedes: 4/21
Lit: #4893