

ECCOSHIELD® VX

Conductive Compound for Caulking

Material Characteristics

- ECCOSHIELD® VX is a single-component conductive paste material formulated with a high concentration of silver-plated copper particles in a hydrocarbon resin
- When properly applied to the seams of an enclosure or to the threads of conduit, it is possible to achieve insertion losses in excess of 100 dB from 200 kHz through 10 GHz
- ECCOSHIELD® VX as a thread compound is in accordance with the following MIL Standards: MIL-A-18123 (ships), MIL-E-4957A (ASG), and MIL-STD-285 on 6 inch (15 cm) diameter electric conduit
- ECCOSHIELD® VX will not harden in time; is completely non-reactive, and there is no corrosion problems

Applications

- ECCOSHIELD® VX is specifically designed as an effective caulking and sealing compound used to assure the RF integrity of structures
- When used as a pipe-thread compound in conduit, ECCOSHIELD® VX assures a completely water-tight, air tight, and RF-tight joint
- When ECCOSHIELD® VX is applied as a coating it will actually protect certain surfaces

Shipping & Availability

- ECCOSHIELD® VX is sold by the pound in one pound (9 oz.) glass jars
- ECCOSHIELD® VX does ship as a hazardous material: Class 3 Flammable, UN1866, PG II

Instructions for Use

- ECCOSHIELD® VX is a simple conductive sealer to use. No mixing or components are required
- To assure uniformity, mix ECCOSHIELD® VX in the container which it was received
- Clean the surfaces or threads to which it will be applied to using a wire brush
- Apply sufficient material so that a small amount is squeezed out. The excess can be returned to the container and reused
- To caulk an already assembled joint, run a bead along the joint and force the material into the seam with a spatula or putty knife
- For cleanup, any commonly used solvent such as toluene or MEK can be used

Typical Properties

Appearance	Silver-black
Service Temperature, °F (°C)	-80 to 250 (-62 to 121)
Volume Resistivity, ohm-cm	<0.05
Length of adequate seam bead/pound	27 ft (8.2 m)
Thermal Conductivity, (BTU-in/hr/ft ² /°F) (cal-cm/sec/cm ² /°C)	~30 ~0.01
Shelf Life	6 months

Conduit Shielding

	Bare Threads	Threaded with VX compound	Welded
200 kHz (magnetic)	35	>110	>110
1 MHz (magnetic)	46	>130	>130
1 MHz (electric)	>110	>110	>130
10 MHz (magnetic)	54	>120	>130
10 MHz (electric)	>110	>120	>130
450 MHz		>110	110
1000 MHz	60	100	95

EMERSON & CUMING MICROWAVE PRODUCTS, INC., 28 York Avenue, Randolph, MA 02368 / Telephone (781) 961-9600. Use of Information and Material: Values shown are based on testing of laboratory test specimens and represent data that falls within normal range of the material. These values are not intended for use in establishing maximum, minimum or ranges of values for specification purposes. Any determination of the suitability of the material for any purpose contemplated by the user and the manner of such use is the responsibility of the user. The user should determine that the material meets the needs of the user's product and use. We hope that the information given here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale INCLUDING THOSE LIMITING WARRANTIES AND REMEDIES, which apply to all goods supplied by us. We assume no responsibility for the use of these statements, recommendations or suggestions nor do we intend them as a recommendation for any use, which would infringe any patent or copyright. Emerson & Cuming Microwave Products Inc.