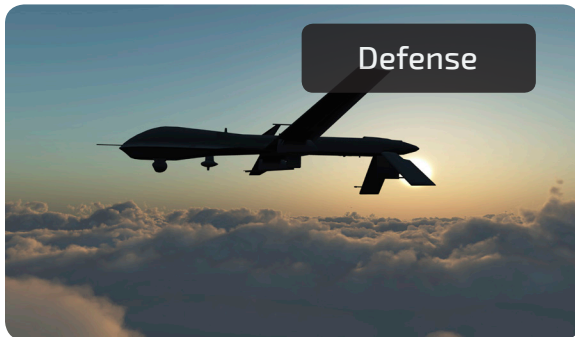




SSP

silicones that work

Guide to EMI/RFI Shielding Elastomers



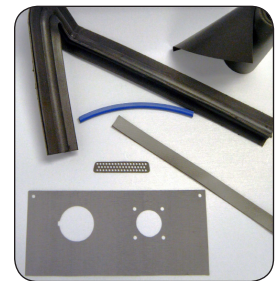
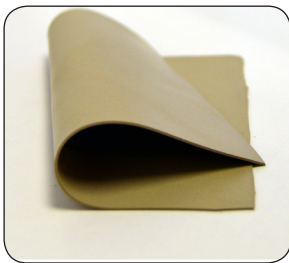
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STANDARD EMI/RFI ELASTOMERS

SSP has developed a line of conductive silicone elastomers that are designed to meet the requirements outlined for the MIL-DTL-83528C specification. Our conductive materials are used to produce shielding gaskets for Military, Aerospace, electronics, automotive, and Tel-com applications.

Our range of conductive silicones has expanded to include materials that are designed to balance requirements for electrical conductivity and cost performance for the commercial sector.

We supply our conductive products as an uncured moldable compounds, compression molded sheetstock, and, in some cases, as a continuous roll. These options allow customers to convert our silicones into their own finished product using the most efficient method for them.



WHAT QUESTIONS NEED TO BE ANSWERED TO PICK THE RIGHT MATERIAL?

1. What is the approximate SHIELDING EFFECTIVENESS you need to achieve for the application?
2. What environment will this material be exposed to? Does this need to be solvent or fuel resistant?
3. Are you looking for a semiconductive/static dissipating material or is this a true EMI/RFI shielding application?

HOW FILLER TYPE IS ASSOCIATED WITH COST AND PERFORMANCE:

SSP Product	Typical Filler Type	Cost	Conductivity	Typical Shielding Effectiveness
SSP555	Pure silver	\$\$\$\$\$\$	Extremely conductive	120db (TIV)
SSP2368	Silver plated aluminum	\$\$\$\$	Super conductive	115db-125db (FTRA)
SSP547	Silver plated copper	\$\$\$\$	Super conductive	120db (TIV)
SSP416	Silver plated glass	\$\$\$	Very conductive	80db-100db (TIV)
SSP502	Nickel plated graphite (SSP superior formula)	\$\$	Very conductive	115db-125db (FTRA)
SSP1529	Carbon black	\$	Semi-conductive	60db-80db (TIV)

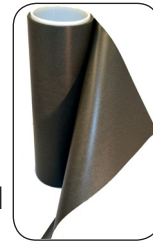
TIV=Typical Industry Value, FTRA=Full Third Party Test Result Available

Note: All materials available in various Shore A Durometers and fluorosilicone grades with exception of SSP1529.

NEXT GENERATION EMI/RFI SHIELDING SILICONES

EMI/RFI conductive silicone rubber materials were designed by SSP in direct reponse to customer problems typically faced with metal filled slastomers. Some of the solutions include:

- **Ultra thin** sheets and rolls, as thin as .009"
- **Continuous rolls**
- **Reinforced** EMI/RFI silicones
- **Superior** nickel coated graphite silicones with performance levels of silver coated products
- **Ultra soft** silicones as low as 30 shore A, available in nickel coated and silver coated products



All grades available in 0.009" thickness SSP's technology can produce the thinnest particle filled elastomers on the market

- As technology moves to thinner screens, kiosks, and designs, the room for gaskets is limited and the thinnest EMI/RFI gaskets are needed

SSP502 Superior Performance nickel graphite filled silicones SSP has developed a first of its kind nickel coated graphite that yields the shielding effectiveness results of industry silver coated material. The full third party test results are available by request.

- Silver coated materials are very expensive and extremely volatile in price
- EMI/RFI Shielding is moving into the commerical markets with smart technologies and communications, where the volatile and high priced seals aren't practical

<u>Product</u>	<u>Description</u>	<u>Why it was developed</u>
SSP502-65-COMPOSITE	<ul style="list-style-type: none"> • reinforced conductive silicone, made of nickle coated graphite silicone, coated on both sides of a conductive fabric • provided on a continuous roll from 3 to 15 inches wide 	<ul style="list-style-type: none"> • creates superior tear strength • does not tear when cutting, installing, or packaging small cross section gaskets • greatly increases conductivity performance
SSP502-65-CR	<ul style="list-style-type: none"> • nickel coated graphite silicone manufactured on a continuous roll vs. the more common molded sheet stock 	<ul style="list-style-type: none"> • automated process ability • 5x faster lead times • optimal yield on expensive materials • various thickness options without new tooling
SSP502-30/SSP2426-30	<ul style="list-style-type: none"> • ultra-soft shore A, EMI/RFI materials filled with nickel coated graphite and silver plated aluminum 	<ul style="list-style-type: none"> • allows for more compression • better sealing properties • lower shore with no impact on shielding effectiveness



Wondering what is different about Specialty Silicone Products?

What allows us to produce particle filled elastomers in ways thought to be impossible for many years?

The answer is in our story, and the history of the people who founded SSP..

SSP was founded in 1989 by four colleagues working for GE Silicones, who identified several unmet markets within the silicone industry. For many years our EMI/RFI particle filled shielding elastomers were produced for only a few companies. Global demand started growing and silver coated products became extremely expensive many customers came to SSP looking for some help.

In our crazy new world of smart technology, everything is turning wireless and requires electromagnetic shielding to protect the electronics within, or the people using them, from emissions. A shift has begun to occur from aerospace and military to commercial applications. The commercial world is demanding materials that perform like silver plated materials, but cannot endure the cost or the price volatility.

SSP was able to bring our vast understanding of silicone formulation technology to the table and develop products to directly meet customer needs. Our chemists, engineers, and operators have created new technologies that contain nickel coated graphite silicones with the shielding effectiveness results of silver coated products at a less volatile, more realistic price point.

Other breakthrough technologies allow us to make products stronger, softer, thinner, and continuously in our one of a kind continuous roll manufacturing methods. All of these products are within this brochure and we welcome you to request samples, information, or guidance any time.

We look forward to growing with you and your organization in this fast moving world!

For more information visit www.SSPinc.com.
To order, call (518)885-8826/ or Fax (518) 885-4682

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