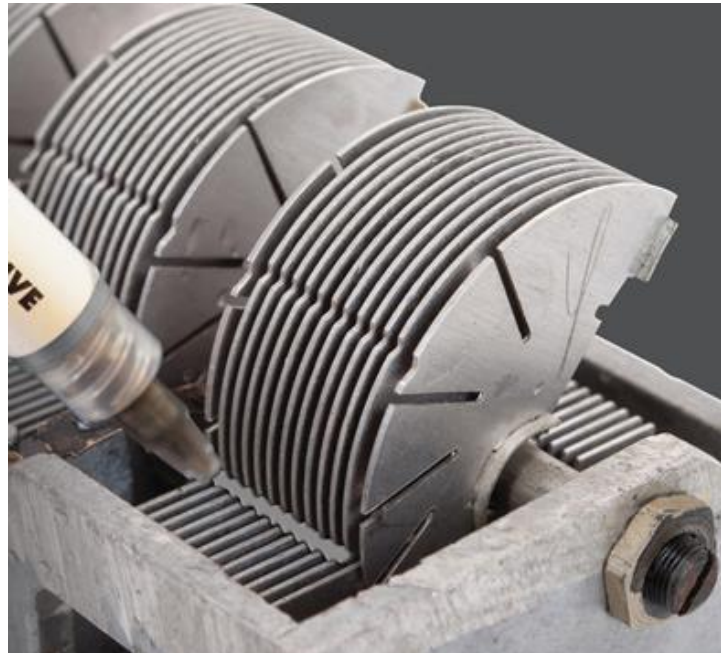


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Electrically Conductive Greases



Fothershield

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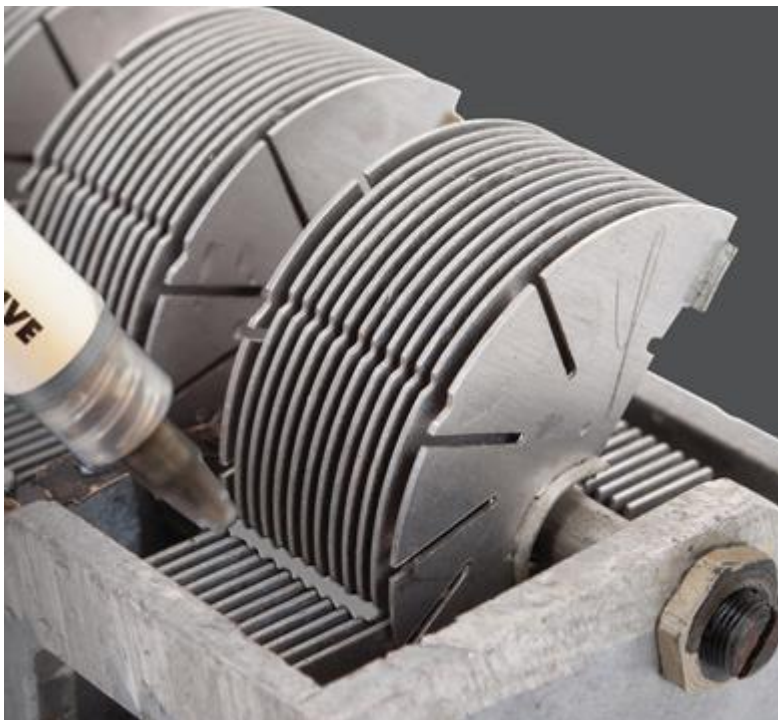
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ELECTRICALLY CONDUCTIVE GREASES

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Fothershield's range of conductive greases are used to improve electrical conductivity and also protect against corrosion and moisture. The greases displace air between irregular surfaces with conductive material which lowers the electrical resistance between the surfaces. The greases are safe to use on most plastics and are corrosion resistant. Used for electromagnetic interference (EMI) shielding, to provide electrical contact between irregular surfaces, lubrication between moving parts and for prevention of arcing, hotspots, pitting and welds between surfaces.



Electrically Conductive Grease Comparison Chart

Part Number	FS-8463	FS-8481	FS-846	FS-847
Conductive Filler	Carbon, Silver	Carbon, Graphite	Carbon	Carbon
Base Material	Silicone Oil	Synthetic Oil	Silicone Oil	Synthetic Oil
VOC	31%	4%	0%	0%
Shelf Life	5 years	5 years	5 years	5 years
Physical Properties				
Colour	Silver	Black	Black	Black
Odour	Odourless	Odourless	Odourless	Odourless
Density @25°C	2.35g/ml	1.01g/ml	1.05g/ml	1.07g/ml
Viscosity	Thixotropic	Thixotropic	Thixotropic	Thixotropic
Evaporation Loss*	0.5%	2.0%	2.6%	0.3%
Oil Separation**	10%	5%	0.4%	1.8%
Dropping Point	>304°C	>300°C	>304°C	>304°C
Water washout @38°C	0.6%	0.9%	1.3%	0.2%
Worked Penetration***	N/A	315	269	174
Oil Viscosity Index****	N/A	>110°C	N/A	>110°C
Lubrication	High	Very high	Very high	Very low
Bleed Resistant	No	Yes	No	Yes
Emcor Rust Test*****	N/A	#0	#1	#3
Electrical Properties				
Volume resistivity	N/A	160Ω.cm	114Ω.cm	46Ω.cm
Volume Conductivity	N/A	0.006S/cm	0.009S/cm	0.02S/cm
Thermal Properties				
Thermal Conductivity @25°C	~0.45W/mK	0.29W/mK	N/A	N/A
Constant Service Temp.	-50°C to 200°C	-68°C to 165°C	-50°C to 200°C	-50°C to 200°C

N/A = Not available

* Evaporation loss tested for 22 hours at 165°C

** Oil separation tested for 30 hours at 165°C

*** 60 strokes, ½ scale

**** High oil viscosity index of over 100 indicates small oil viscosity changes with temperature

***** Tested using distilled (DI) water. Emcor corrosion rating is ranked from 0 (no corrosion) to 4 (corrosion)

FS-846 – CARBON CONDUCTIVE GREASE

This electrically conductive silicone grease is formulated to improve electrical connections between sliding parts. Economical to use it protects against humidity, stops corrosion and provides excellent lubrication. Used incorrectly, FS-846 Carbon Conductive Grease may cause shorts. For non-bleeding or non-migrating electrically conductive grease see FS-847 Carbon Conductive Assembly Paste.

- Improves electrical connections between irregular surfaces
- Extends the life of contacts
- Safe on plastics
- Ensures electrical contact between loose or vibrating parts and small gaps
- Temperature range -50°C to 200°C
- Volume resistivity of 114Ω·cm
- Surface gap bridging
- Irregular or potted surface electrical conductor
- Colour - Black

How to Order

Part No.	Packaging	Net Volume	Net Weight
FS-846-80G	Tube	76.2ml	80g
FS-846-1P	Jar	495ml	520g

FS-8463 – SILVER CONDUCTIVE GREASE

A high end conductive silicone grease formulated to improve both electrical and thermal connections between sliding surfaces. With superior lubrication, this grease inhibits corrosion and repels humidity. Used to lubricate switches, circuit breakers, heat dissipation and static grounding for O rings, it may also be used as an EMI shielding gasket. FS-8463 may short when used incorrectly. For non-bleeding or non-migrating electrically conductive grease see FS-847 Carbon Conductive Assembly Paste.

- Improves electrical connections between irregular surfaces
- Ensures electrical contact between loose or vibrating parts
- Prevents arcing, pitting, hotspots, and welds
- Wide service temperature range of -50°C to 200°C
- Good thermal conductivity
- Safe on plastics
- Circuit breaker lubrication

How to Order

Part No.	Packaging	Net Volume	Net Weight
FS-8463-7G	Syringe	3.0ml	7.0g

FS-847 – CARBON CONDUCTIVE ASSEMBLY PASTE

An electrically conductive, non-bleeding grease which improves electrical connections between non-moving parts. Ideal for bus-bars and where a flowable grease is undesirable. Due to the non-bleed nature of the grease, short circuits are less likely. The product does not contain silicone, has a wide operating temperature range and inhibits corrosion.

- High conductivity of 0.04S/cm
- Low volume resistivity of $23\Omega\cdot\text{cm}$
- Wide service temperature range of -50°C to 200°C
- Does not separate or bleed
- Withstands high temperature without bleeding, flowing, drying, or chemical degradation
- Lubricates even at very low temperature
- Non-corrosive
- Volatile Organic Compound (VOC) of zero

How to Order

Part No.	Packaging	Net Volume	Net Weight
FS-847-25ML	Jar	25 ml	26.8 g
FS-847-1P	Jar	466 ml	0.500 g





FS-8481 - PREMIUM CARBON CONDUCTIVE GREASE

An electrically conductive grease, synthetic oil based, silicone free with corrosion inhibitors. This enables the product to withstand 300 hours of salt fog testing (automotive grade). This grease has been developed to be both electrically conductive as well as provide high levels of corrosion protection. This product is very stable and does not separate, even under extreme temperature changes.

FS-8481 is a lubricant and may short if used incorrectly. For non-bleeding, non-migrating electrically conductive grease, use FS-847 Carbon Conductive Assembly Paste.

- Improves electrical connections between irregular or pitted surfaces
- Service temperature range of -68°C to +165°C
- Volume Resistivity <math><400\Omega/\text{cm}</math>
- Ensures electrical contact between loose or vibrating parts
- Prevents arcing, pitting, hotspots and welds
- Strong corrosion resistance, withstands over 300 hours of salt fog exposure
- Does not separate under temperature cycling
- Silicone free, safe on plastics

How to Order

Part No.	Packaging	Net Volume	Net Weight
FS-8481-1	Tube	85ml	84.4g
FS-8481-2	Jar	453ml	0.465g

All technical data herein is accurate to the best of our knowledge based on our most up to date testing information and material specifications. This information is not presented as a warranty or guarantee and is not intended to be all inclusive as to conditions of use. The data herein represents typical properties and is not to be used as a basis for a specification.