EXTEND THE LIFE OF YOUR POWER UTILITY EQUIPMENT

Protect your assets and improve their **PERFORMANCE**



CONTENTS





About Us

WHO WE ARE

We are Midsun Group Inc., a US-based company with international operations established in 1992. We help power utility, industrial and telecommunications industries by providing services and products to increase reliability and save companies time and money. Midsun manufactures long lasting RTV coatings for high voltage insulators, anti-corrosion silicone coatings and wildlife protective silicone covers. We strive to excel in terms of product, services, price, performance and delivery.

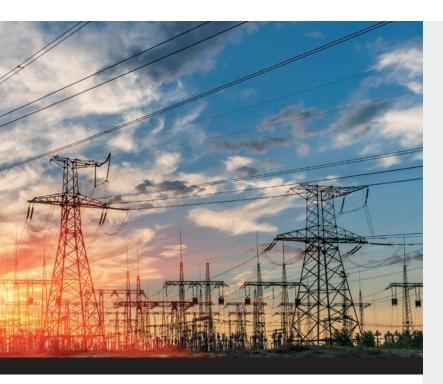


OUR OFFERINGS

- Silicone covers and silicone RTV coatings
- Global Applicator Network
- Demonstrations and training
- Multilingual service and experts
- Custom-made solutions and products
- Fast delivery







WHY US ?



Vast Experience

We have served electrical utilities Transmission Substation Operations and Distribution Substation Operations, refineries and industrial plants since 1992.

2

Worldwide Presence

We have worked in over 55 countries covering 5 continents and in over 20 languages.



Earned Trust

We are a trusted American brand providing products and services for the largest electrical utilities across the USA and worldwide.



Why Silicone?

Aging & Longevity 🛈

Silicone rubber provides superior insulation and dielectric strength. It ages very slowly and outperforms plastic covers. Our products provide increased reliability and a long-term solution for utilities throughout the world.

UV and Weather Resistant $\$ & \bigcirc

Unlike other generic plastic covers in the industry, silicone is naturally resistant to ultraviolet rays and will not fade or break down in direct sunlight. Silicone also provides resistance to extreme temperatures and contaminants in harsh environments making them exceedingly durable.

Versatility 🖨

Silicone is flexible, hydrophobic and can be custom-fit to solve nearly any wildlife protection problem. Regardless of inclement weather or animal contact, we have a cover or coating to help prevent disaster.











Animal Outage Protection

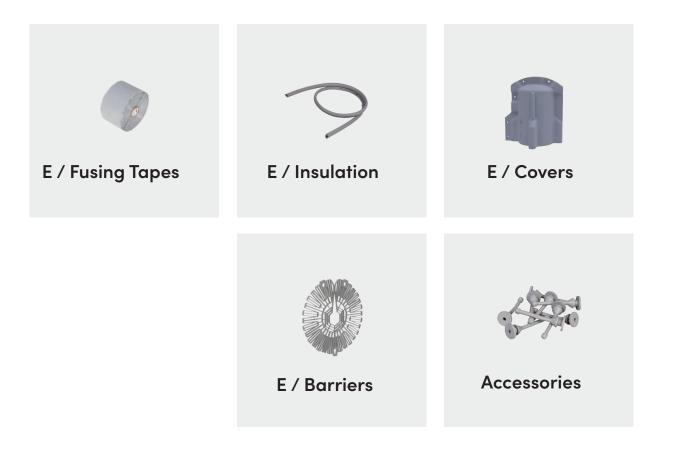
Your Equipment is at Risk

Animals hanging around your transmission, substation and distribution power equipment poses a very large danger to both animals and the reliability of your assets. When wildlife creates a connection via phase-tophase or phase-to-ground contact, it can trigger an arc flash, leading to severe outages.

Such disruptions can impose significant costs and inconvenience on both the utility and its customers.

E/Products | Your Solution

We offer an extensive selection of extruded, molded and mandrel wrapped silicone protection products for electrical transmission, substatation, and distribution lines. Our silicone wildlife products provide a cost-effective and easy-to-install solution to animal phase-to-phase and phase-to-ground contact outages. They provide superior dielectric strength, tracking resistance, thermal endurance, and UV protection.



E/Fusing Tape

MEETS IEEE 1656 STANDARD

E/FUSING TAPES

Our 30Mil self-fusing silicone tape forms a custom-fit, insulating barrier to prevent animal contact with complex power utility equipment.

E/Fusing tape provides **15kV phase-to**ground insulation rating with a single wrap and **30kV** with a double wrap.

> 30 mil (.76 mm) Thickness

FEATURES:

- Self fusing
- Flexible Conforms to odd shaped equipment
- Resists UV, corona, salt, weather and chemicals
- Silicone rubber resists aging and weathering
- Available in Gray or Red

Part #:

E/FTP - 100G - Gray, 30 mil, 1 in x 36 ft, .76 mm x 25.4 mm x 10.9 m

E/FTP - 100R - Red, 30 mil, 1 in x 36 ft, .76 mm x 25.4 mm x 10.9 m

E/FTP - 250G - Gray 30 mil, 2.5 in x 36 ft, .76 mm x 63.5 mm x 10.9 m

E/FTP - 250R - Red 30 mil, 2.5 in x 36 ft, .76 mm x 63.5 mm x 10.9 m

E/FTP - 400G - Gray 30 mil, 4 in x 36 ft, .76 mm x 101.6 mm x 10.9 m

E/FTP - 400R - 30 mil, Red - 4 in x 36 ft, .76 mm x 101.6 mm x 10.9 m

Installation Instructions



HIGH INSULATION E/FUSING TAPES

Our 80Mil self-fusing silicone tapes offer **35 kV phase-to-ground** insulation with a 2/3 overlap and a 10% stretch with a single wrap. A second 2/3 overlap of tape will achieve **50 kV phase-to-ground** insulation. Available in a 2.5 in and 4 in width. **80 mil**



FEATURES:

- Self fusing
- Flexible Conforms to odd shaped equipment
- Resists UV, corona, salt, weather and chemicals
- Silicone rubber resists aging and weathering
- Available in Gray or Red

Part #:

E/FTP - 25080 - 35kV Gray - 80 mil, 2.5 in x 15 ft, 2.0 mm, 63.5 mm x 4.572 m

E/FTP - 25080 - 35kV Red - 80 mil, 2.5 in x 15 ft, 2.0 mm x 63.5 mm x 4.572 m

E/FTP - 480 - 35kV Gray - 80 mil, 4 in x 15 ft, 2.0 mm x 101.6 mm x 4.572 m

E/FTP - 480 - 35kV Red - 80 mil, 4 in x 15 ft, 2.0 mm x 101.6 mm x 4.572 m



MOLDABLE SILICONE PUTTY

Fill voids to prevent animal or liquid incursion. Use on potheads, conduits, pipes, seams, gaps and more. Can also be used to replace custom gaskets and build channels to divert liquid away from areas of concern. Works on masonry, PVC, ABS, metal, wood, ceramic, glass, and more.

FEATURES:

- Low water absorption Divert or block liquid on nearly any surface
- Excellent resistances Resists UV, corona, salt, weather, and extreme temps
- Stays pliable Will not harden, brittle, crack or craze due to weathering
- Great dielectric strength Rated 400V/mil
- Reusable Can be removed and remolded into other areas

E900-010 - 0.25 in thick x 1 in wide x 18 in long (0.635 cm x 2.54 cm x 45.72 cm)







E/Insulation

MEETS IEEE 1656 STANDARD APPROVED FOR RURAL UTILITIES SERVICE

Silicone conductor covers are used to protect a variety of distribution and substation equipment at 20 kV phaseto-ground. E/Insulation is manufactured with a split seam to allow for an easy application without the need of breaking electrical connections.

FEATURES:

- Reusable •
- Easy on/off application
- Weather, flame arc, ozone and UV resistant
- Durable
- Will not crack over time





E/Insulation Part # E/INS-200-G being used with E/Bus Support Cover Part # E/BSC

E/INSULATION 20KV SPLIT TUBING

Part #	Size	Conductor Size (AWG or kcmil)	Conductor (OD) Diameter Size
E/INS-025-G	0.25 in (6.35 mm)	4, 6	.250 in (6.35 mm)
E/INS-050-G	0.50 in (12.7 mm)	2, 1/0, 2/0, 3/0, 4/0	.251 in500 in (6.38 mm - 12.70 mm)
E/INS-075-G	0.75 in (19.05 mm)	266.8 - 336.4, 397.5	0.501 in – 0.750 in (12.73 mm – 19.05 mm)
E/INS-100-G	1.00 in (25.4 mm)	447, 556.5, 605, 636, 666.6, 715.5	0.751 in – 1.00 in (19.08 mm – 25.4 mm)
E/INS-125-G	1.25 in (31.75 mm)	795, 900, 954, 1033.5, 1113,	1.001 in – 1.25 in (25.65 mm – 31.75 mm)
E/INS-150-G	1.50 in (38.1 mm)	1192.5, 1272, 1351.5, 1431, 1590	1.251 in – 1.500 in (31.78 mm – 38.10 mm)
E/INS-175-G	1.75 in (44.45 mm)	1780, 2156, 2167, 2300	1.504 in – 1.735 in (38.20 mm–44.07 mm)
E/INS-200-G	2.00 in (50.8 mm)	2312, 2515	1.760 - 1.980 (44.70 mm - 50.29 mm)

E/INS-025 - E/INS-175 - Packaging: consists of 50 ft increments (15.2 m) E/INS-125 - G-175-G - Packaging: 2x 25 ft increments

E/INS-200 - Packaging: 25 ft per box - Available in Orange

E/INSULATION 15 KV THIN WALL SPLIT TUBING

Part #	Rating	Wall Thickness
E/INS-Thin Wall-025 -G	15 kV phase to ground	.100 +/020
E/INS-Thin Wall-050-G	15 kV phase to ground	.100 +/020
E/INS-Thin Wall-075-G	15 kV phase to ground	.100 +/020
E/INS-Thin Wall-100-G	15 kV phase to ground	.100 +/020
E/INS-Thin Wall-125-G	15 kV phase to ground	.100 +/020

100 ft (30.48 m) per box

E/Insulation Thin Wall is a silicone split line rubber hose used mainly in distribution and rated up to **15 kV phase-toground.** It is lighter in weight than the standard E-Insulation, and more economical in cost.

E/INSULATION INSTALLATION TOOLS



Product Name	Part #	Drawing	Compatible With
Hand Glider Speeds up installation	E-INS-GLIDER-750	329-00-01	E/INS-025-G, E/INS-050-G, E/INS-075-G, E/INS-THIN WALL-050-G, E/INS-THIN WALL-075-G





E/LARGE DIAMETER ROUND BUS COVER

POLYESTER REINFORCED

- **E/INS-250G** 2.5 in (63.50 mm)
- **E/INS-350G** 3.5 in (88.90 mm)
- **E/INS-450G** 4.5 in (114.30 mm)
- **E/INS-650G** 6.5 in (165.10 mm)

E/INS-250-G - E/INS-650-G - Packaging: consists of 50 ft (15.2 m) | 5 pieces of 10 ft (3.0 m)

UNREINFORCED

- E/INS-EXT-250G/5 2.5 in (63.50 mm)
- E/INS-EXT-350G/5 3.5 in (88.90 mm)
- E/INS-EXT-450G/5 4.5 in (114.30 mm)

5 ft (1.52 m) length

E/TUBE SEAMLESS COVER 40KV

E/Tube-050/094-G- Insulation Size:
0.50 in | Conductor (AWG) Size: 3/0, 4/0
| Conductor OD Diameter Size: 0.4096 in
- 0.500 in (10.40 mm - 12.70 mm)
**Insulates 40kV phase-to-ground

100 ft (30.48 m) per box

E/T BUS COVER UNIVERSAL

• **E/T-BUS Cover** - 3.5 in x 5.73 in x 5 ft (88.9 mm x 145.4 mm x 1.52 mm)

Available in 5 ft increments (1.5 m)

E/ANGLE BUS COVER

- E/INS-ABC-325" Tail-G-60" 3.25 in (82.55 mm)
- E/INS-ABC-4.00" Tail-G-60" 4.0 in (101.60 mm)

Available in 5 ft increments (1.5 m)

E/FLAT BUS COVER

- **E/INS-FLAT325G-5** 3.25 in (82.55 mm)
- **E/INS-FLAT400G-5** 4.0 in (101.60 mm)

Available in 5 ft increments (1.5 m)











E/Silicone Covers

MEETS IEEE 1656 STANDARD APPROVED FOR RURAL UTILITIES SERVICE

Our silicone covers are designed to protect various styles of energized connections. Unlike other plastic solutions, you can make modifications to our covers to make an optimal fit. They all offer up to **25 kV phaseto-ground** insulation.

FEATURES:

- Superior dielectric strength
- Flame Retardant
- Made from 65 durometer silicone
- Superior UV and chemical resistance
- Expected life span beyond 20 years
- Hydrophobic



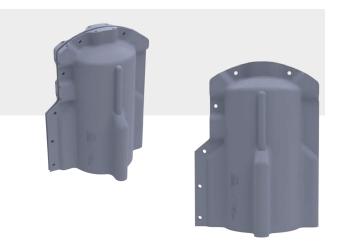




E/BUSHING COVER MEDIUM

This product will insulate a bushing with a height up 10.86 in (275.84 mm) tall and a width of 6.7 in (170.18 mm).

Part #: **E/BC-M** Drawing #: 346-00-02



E/BUSHING COVER EXTRA LARGE

This product will insulate a bushing with a height up to 11.8 in (299.72 mm) and a width of 6.7 in (170.18 mm).

Part #: **E/BC-X-LGE** Drawing #: 346-00-01

E/BUSHING COVER LARGE

This product will insulate a bushing with a diameter up to 8 in (203.2 mm).

Part #: **E/BC-LG** Drawing #: 128-00-01





ACCESSORIES FOR E/BUSHING COVER LARGE



E/LARGE BUSHING COVER RIGHT ANGLE EXTENSION

Gives an additional 6.8 in (172.72 mm) to the width of the bushing cover and also features a right angle exit point.

Part #: **E/BC-LG-X-WRA-CAP** Drawing #: 205-00-01



Gives an additional 6.8 in (172.72 mm) to the width of the bushing cover.

Part #: **E/BC-LG-X-W** Drawing #: 199-00-01

E/LARGE BUSHING COVER WIDTH TOP EXTENSION

Gives an additional 5 in (127.0 mm) to the top/width of the bushing cover.

Part #: **E/BC-LG-X-WT** Drawing #: 202-00-01



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E/LARGE BUSHING COVER HEIGHT EXTENSION

Gives an additional 6.1 in (154.94 mm) to the height of the bushing cover.

Part #: **E/BC-LG-X-H** Drawing #: 201-00-01

E/LARGE BUSHING COVER HEIGHT FILLER EXTENSION

Extension used in conjunction with a height and width filler.

Part #: **E/BC-LG-X-H/F** Drawing #: 203-00-01

E/LARGE BUSHING COVER RIGHT ANGLE PORT CONE

Extension used in conjunction with right angle extension.

Part #: **E/BC-LG-X-WRA/CR5** Drawing #: 197-00-01

E/BUSHING COVER RIGHT ANGLE EXTENSION CAP

Cap for Bushing Cover Right Angle Extension.

Part #: **E/BC-LG-X-WRA-CAP ONLY** Drawing #: 195-00-01











E/BIRDCAGE MEDIUM

Silicone cover with semi-exposed walls allows for easy visual and IR inspection and visibility while covering medium bushings with a double or single lead connection.

Part #: **E/BIRDCAGE-MED (W/SUPPORT)** Drawing #: 302-00-01

E/BIRDCAGE LARGE

Silicone cover with semi-exposed walls allows for easy visual and IR inspection and visibility while covering large bushings with a double or single lead connection.

Part #: **E/BIRDCAGE-LGE (W/SUPPORT)** Drawing #: 302-00-02

E/BUSHING COVER FULL

Silicone bushing cover designed to fit medium sized transformer breaker, and regulator bushings and arrestors. Will fit bushing diameters up to 5 in (127.0 mm).

Part #: **E/BC-Full** Drawing #: 129-00-01

E/BUSHING COVER HALF

Silicone bushing cover designed to fit small station service transformer bushings, PT's and CT's, and pole top transformer bushings, from 6.9 in (175.26 mm) high with an opening of 5.2 in (132.08 mm).

Part #: **E/BC-Half** Drawing #: 130-00-01















E/BUSHING COVER SMALL

Silicone bushing cover designed to fit small station service transformer bushings, PT's and CT's, and pole top transformer bushings with a height of 6.4 in (162.56 mm) and with an opening of 3 in (76.2 mm).

Part #: **E/BC-Small** Drawing #: 210-00-01





E/BUSHING COVER SIDE

Silicone bushing cover designed for recloser bushings. Perforated bottom allows it to fit various sized bushings that are up to 11.5 in (292.1 mm) high with an opening of 5.9 in (149.86 mm) wide.

Part #: **E/BC-Side** Drawing #: 180-00-02



E/BUSHING COVER C-BAR

Silicone busing cover designed to fit large bushings with double right angle lead connections.

Part #: **E/C-BAR CV** Drawing #: 287-00-01





E/BUSHING COVER MULTIPORT

Silicone cover that accommodates bushings with multiple lead connections.

Part #: **E/BC-Multiport** Drawing #: 185-00-01



E/RIGHT ANGLE BUSHING COVER

Silicone cover designed to fit large bushings with double right angle lead connections.

Part #: **E/BC-RA** Drawing #: 104-00-02

E/90° RIGHT ANGLE BUSHING COVER

Silicone cover designed to fit larger single or double lead right angle bushing connections.

Part #: **E/BC-90RA** Drawing #: 236-00-01





Silicone cover that accommodates bushings with multiple lead connections.

Part #: **E/BC-DBL -LEAD** Drawing #: 155-50-01





E/LIGHTNING ARRESTOR COVER

Silicone cover designed to fit multiple substation lightning arrestors. Adapts to different bus and lead connections. Easy on/off application.

Part #: **E/LAC** Drawing #: 137-10-01





Silicone cover designed for bus support insulators. Accommodates round, flat or angle bus ranging from 0.5 in (12.7 mm) to 3 in (76.2 mm).

Part #: **E/BSC** Drawing #: 127-00-01

E/BUS SUPPORT COVER 3.50

Technical data:

Silicone cover designed to accommodate round, flat, or angle bus insulators ranging from 3 in (76.2 mm) to 4.5 in (114.3 mm).

Part #: **E/BSC-350** Drawing #: 127-20-01

E/BUS SUPPORT COVER XL

Silicone cover designed for bus support insulators. Accommodates round, flat or angle bus ranging from 4.5 in (114.3 mm) to 5.5 in (139.7 mm).

Part #: **E/BSC - XL** Drawing #: 113-00-00

E/BUS SUPPORT COVER XXL

Silicone cover designed for bus support insulators. Accommodates round, flat or angle bus ranging from 4.00 in (101.6 mm) to 6.00 in (152.4 mm).

Part #: **E/BSC-XXL** Drawing #: 113-00-01













E/TERMINATION COVER

Silicone cover designed to cover termination bushings.

Part #: **E/Term-CV** Drawing #: 164-20-01

E/SUBSTATION TERMINATION COVER

Silicone cover designed to protect various sizes of termination substrates. Allows for a quick on/off application.

Part #: **E/STC** Drawing #: 284-00-01



E/FUSE CUTOUT COVER

Silicone cover designed for use on fuse cut out switches. Design allows for easy opening and closing of fuse.

Part #: **E/FUSE CUT OUT CVR** Drawing #: 132-00-01





E/FUSE CUTOUT COVER LARGE

Silicone cover designed for use on larger fuse cut out switches. Design allows for easy opening and closing of fuse.

Part #: **E/FUSE CUT OUT-LG ASSY** Drawing #: 260-10-01





E/PIN INSULATOR COVER SMALL

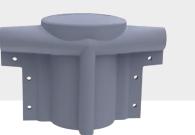
Silicone cover designed to protect against bird and animal contact on standard crossarm pin insulators.

Part #: E/PIN INS CV-SM Drawing #: 126-00-02

E/PIN INSULATOR COVER MEDIUM

Designed to protect against bird and animal contact on standard cross arm pin insulators.

Part #: E/PIN INS CV-MED Drawing #: 126-00-03



E/PIN INSULATOR COVER TALL

Designed to protect large crossarm pin insulators.

Part #: E/PIN INS CV-TALL Drawing #: 126-00-04

E/PIN INSULATOR COVER LARGE

Designed to protect against bird and animal contact on large cross arm pin insulators.

Part #: E/PIN INS CV-LG Drawing #: 126-00-01

E/PIN INSULATOR COVER SMT35

Designed to protect against bird and animal contact on large cross arm pin insulators.

Part #: E/PIN INS CVR SMT35 Drawing #: 126-20-01









E/SURGE ARRESTOR COVER

Designed to fit taller lightning arrestors with a pass through lead or pole top bushings.

Part #: **E/SRG-ARR-CVR** Drawing #: 268-00-02

E/POLE TOP LIGHTNING ARRESTOR CAP

Designed for pole top right angle lightning arrestor.

Part #: **E/PT-LA-CAP** Drawing #: 184-00-01





E/POLE LIGHTNING ARRESTOR RECLOSER COVER

Designed for pole top arrestors with a single lead at a right angle. It may also be used for pole top right angle bushings.

Part #: **E/PT-LA RECLSR-CVR** Drawing #: 262-00-02





E/DOUBLE LEAD LIGHTNING ARRESTOR RECLOSER COVER

Designed for pole top arrestors with double leads at a right angle. It may also be used for pole top right angle bushings.

Part #: **E/PT-DL-LA RECLSR CVR** Drawing #: 262-00-01





E/TRANSFORMER LIGHTNING ARRESTOR RECLOSER COVER

Designed to fit either pole top bushings or lightning arrestors with a pass through lead.

Part #: **E/PT-T-LA RECLR CVR** Drawing #: 262-00-03



Designed for right angle recloser sensors.

Part #: **E/L-SENSOR CV** Drawing #: 247-00-01



E/ RECLOSER VOLTAGE SENSOR COVER

T-shaped for use on recloser T-Sensors.

Part #: **E/SRVSC** Drawing #: 103-00-01





E/CAPACITOR COVER

Designed to protect energized portions of capacitor bushings.

Part #: **E/PT-CAPACITOR-CV - NO HOLES** Drawing #: 227-00-01

Part #: **E/PT-CAPACITOR-CV - WITH HOLES** Drawing #: 227-00-02



E/CAPACITOR CURRENT SENSOR COVER

Designed to insulate the bottom sensor of a Fisher Pierce current sensor.

Part #: **E/CCS-CVR** Drawing #: 266-00-02

E/FPS* CURRENT SENSOR

Designed to insulate the bottom sensor of a *Fisher Pierce current sensor.

Part #: **E/FPS-CVR** Drawing #: 222-00-01

E/CAPACITOR COVER LARGE

Designed with three top ports sized to fit both one and two bushing capacitors.

Part #: **E/CAP CVR LGE** Drawing #: 211-00-01

E/SECTOS SWITCH COVER

Switch cover developed for Schneider or ABB switch assemblies that can be used on distribution circuits.

Part #: **E/SECTOS SWITCH COVER** Drawing #: 354-00-01

E/RIGHT ANGLE COUPLER COVER

Coupler cover designed to protect right angle bends and elbows on round bus.

Part #: **E/RIGHT ANGLE COUPLER** Drawing #: 392-00-01

















A high-temperature vulcanized custom compound silicone sheet with a polyester make fabric reinforcement with a thickness of 0.10 in (2.5 mm) that allows you to custom cut covers. They offer up to **25 kV phase-to-ground** insulation.

FEATURES:

- Hydrophobic
- Flexible & customizable
- Easy to make covers for awkward or difficult shapes
- UV resistant
- Chemical resistant
- 20+ years of life expectancy

Part #: **E/SS-24** Size: 24 in x 120 in (609.6 mm x 3048 mm)

Part #: **E/SS-30** Size: 30 in x 120 in (762 mm x 3048 mm)



E/SILICONE SHEET ACCESSORIES



E/HOLE PUNCH

E/Hole Punch is a spring-loaded punch tool designed for creating precise holes in E/Covers or E/Silicone Sheets. It allows easy installation of E/Push Pins or E/Tie Wraps, eliminating gaps and ensuring a secure fit.

Part #: **E/Hole Punch** Drawing #301-10-01



E/SILICONE PUSH PINS

E/Silicone Push Pins are used to secure Midsun molded covers and E/Silicone Sheets. They are easy to install even while wearing insulated gloves, with a **25 kV phaseto-ground** rating and their life expectancy matches the cover. Each bag contains 50 pins.

Part #: E/Push Pin Single Wall, Gray Drawing #: 147-00-01G Part #: E/Push Pin Single Wall, Red Drawing #: 147-00-01R



E/ Barriers

MEETS IEEE 1656 STANDARD APPROVED FOR RURAL UTILITIES SERVICE

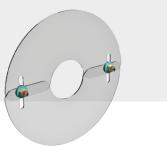
Midsun barriers are designed to block climbing and perching animals from making phaseto-ground contact with energized conductors and equipment. They are available in several diameters and can be removed and reused to suit your needs.

Features:

- High voltage puncture resistance
- Superior strength
- UV and weather resistance
- Adjusts to fit multiple insulator core diameters
- Can be custom made to specific requirements







E/BARRIER 20 IN NO SLOTS

20 in (508.0 mm) diameter two-piece solid transparent barrier

Part #: **E/Bar Sets – No Slots** Drawing #: EBPC–2000–450–125–3A

E/BARRIER 20 IN SLOTTED

20 in (508.0 mm) diameter two-piece transparent barrier with slots.

Part #: **E/Bar Sets – Slots** Drawing #: EBSC-2000-450-125-3A



E/BIRD BARRIER 12 IN

12 in (304.8 mm) diameter two-piece solid transparent barrier.

Part #: **E/Bird Barrier 12" No Slots** Drawing #: EBPC-1200-350-125-3A

E/BARRIER - 24 IN NO SLOTS

Part #: **E/BB-2350** Drawing #: EBPC-2350-525-187

E/ANTI-NESTING BARRIER

Designed with a 30° angle to discourage or prevent bird nesting and animal contact. It is approved for energized application.

Part #: **E-Anti-Nest-Bar 16-34** Drawing #: 299-00-01

Part #: **E-Anti-Nest-Bar 20-45** Drawing #: 299-20-45

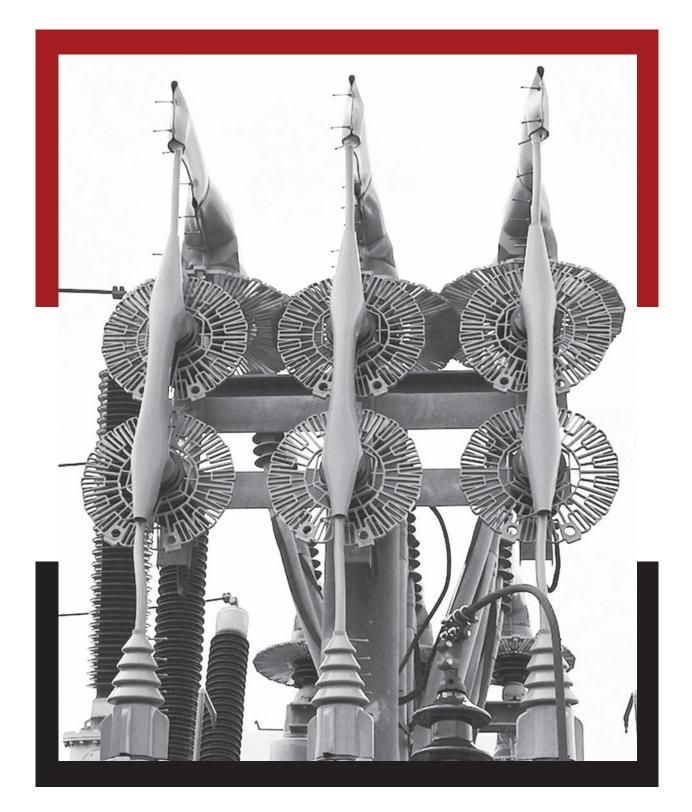




E/Anti-Nest-Bar 16 in (406.4 mm)

E/Anti-Nest-Bar 20 in (508 mm)

> MIDSUN GROUP 33







E/FLEX BARRIER

This flexible barrier allows easy on/off application by sliding between adjacent skirts of an insulator to hold securely in place.

It acts as a long term barrier on substation equipment such as disconnects, switch insulators, arrestor and bus support terminators, and insulators.

			Di	ameter
Part #	Drawing#	Color	in	mm
E/Flex Bar-G-16"	138-16-01G	Gray	16	406.40
E/Flex Bar-R-16"	138-16-01R	Red	16	406.40
E/Flex Bar-G-20"	138-20-01G	Gray	20	508.00
E/Flex Bar-R-20"	138-20-01R	Red	20	508.00
E/Flex Bar-G-24"	138-24-01G	Gray	24	609.60
E/Flex Bar-R-24"	138-24-01R	Red	24	609.60

E/FLEX BARRIER INSERT

Reduces E/Flex Barrier minimum opening from 3.50 in to 2.00 in to fit small polymer insulators.



Part #	Drawing#	Color	Fits Diameter
E/INSERT-FLEX-16-G	138-16-16	Gray	16in
E/INSERT-FLEX-20/24-G	138-20-24	Gray	20-24in



E/GETAWAY GUARD

Consists of 1 large disc assembly and 10 small collars. All discs allow for free rotation preventing climbing animals access through overhead power lines in open-air substations.

FEATURES:

- Can be installed de-energized or energized.
- UV, flame resistant, arc-resistant material.
- Withstands extreme environments.
- Long term protection.

Part #: E/GETAWAY GUARD

Drawing #: 101-00-00

Includes (1) large disc (Must assemble right and left half), 10 Small Collars, (6) Push in Plugs



E/Accessories



E/SILICONE PUSH PINS

These pins are used to secure Midsun molded covers. They are easy to install even while wearing insulated gloves, with a **25kV phase-to-ground** rating and their life expectancy matches the cover. Each bag contains 50 pins.

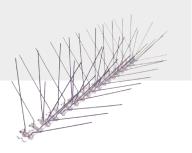
Part #	Drawing#	Color
E/Push Pin Single Wall, Gray	147-00-01G	Gray
E/Push Pin Single Wall, Red	147-00-01R	Red



E/SILICONE TIE WRAP

Silicone tie wraps can replace temporary plastic tie wraps. Silicone ties offer a long life expectancy, a secure hold and an easy on/off application. Each bag contains 10 ties.

Part #	Drawing#	Length
E/Silicone Tie Wrap-9-G	161-00-02	8.6 in
E/Silicone Tie Wrap-13-G	161-00-01	12.72 in
E/Silicone Tie Wrap-27-G	161-00-03	27 in



ANIMAL CONTROL STRIPS

These strips are a stainless steel mitigation barrier that prevents animals from climbing over substation fences and birds roosting on cross arms.

Features:

- Stainless Steel Construction will not discolor other materials
- Versatile conforms to any contour or surface
- Easy to install

Applications:

Substation perimeter fence protection, roofs, utility poles, ledges, columns, bus work, signs, roof ridges and more.

Part #: **E/ACH-185** Drawing #: 254-10-01

E/HOLE PUNCH

Spring-loaded punch tool designed for creating precise holes in E/Covers or E/ Silicone Sheets. It allows easy installation of E/Push Pins or E/Tie Wraps, eliminating gaps and ensuring a secure fit.

Part #: **E/Hole Punch** Drawing #: 301-10-01







E/GROUND STUD COVERS

Silicone cover that allows for easy on/off application with a hot stick. Designed to protect ground stud connectors allowing for 100% maximum protection.

Part #	Drawing#	Max Stud Length
E/GSC-SHORT	204-00-01	1.83 in (46.40 mm)
E/GSC-LONG	163-00-01	4.87 in (123.80 mm)
E/GSC-XLONG	163-00-02	6.18 in (157.08 mm)





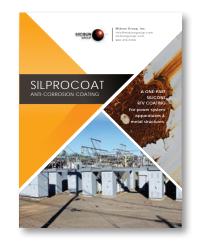


Silprocoat Anti-corrosive Coatings

Our anti-corrosion coatings are formulated with silicone rubber to restore metal structures and equipment on an advanced level. Silprocoat™ is a ready-to-use product that can be sprayed immediately after opening the pail and will last more than 10 years even in the most challenging environments.

Features:

- Extreme heat resistance 320°F (up to 160°C)
- Ideal solution to enclose lead paint
- Optimal corrosion protection i.e. power system equipment, metal hardware and structures, oil and gas storage tanks, pipes and metal barriers
- Strong adhesion
- Anti-aging, offering a long-term solution
- Available in VOC compliant formulations
- UV resistant



Visit midsungroup.com/silprocoat or scan QR to learn more







SILPROCOAT TECHNICAL DATA

Property	Value
Appearance	Paint
Color	Gray/White
Application Temperature range	0 to 120°F (-18° to 49°C)
Application rate (10 mil thickness)	180ft2/US gal
Cure method	Oxime, moisture cure
Skin-over time at standard conditions*	20 minutes
Cure time standard conditions	4 hours
Viscosity (at 25° C)	5000-6400 CPS
Tensile Strength (ASTM D412)	33kg/cm2 (480 PSI)
Elongation at break (ASTM D412)	170%
Tear resistance (ASTM D624, Die B)	6kN/m (34 ppi)
Temperature stability range	-70° to 320°F (-57° to 160°C)
Salt fog exposure (11350 hours)	No corrosion
Accelerated Weathering, 5000 hours (G154 Series)	No degradation
Storage and temperature	2 Years < 77°F (25°C)*

* Properties cured at standard weather conditions for 7 days. * Standard conditions are 77°F (25°C) and 50% relative humidity.

These figures are only intended as a guide and should not be used in preparing specifications.



SELECTION GUIDE

All of our Silprocoat products have a single component one-part room temperature vulcanizing (RTV) polysiloxane elastomer coating and are available in different colors.

- Midsun Silprocoat Solventless VOC No solvent is added.
- Midsun Silprocoat w/Mineral Spirits Solvent: Mineral Spirits.

* Custom formulations and special tools required for energized applications, **contact Midsun for energized applications**.





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High Voltage Insulator Coatings (HVIC)

Salt spray, industrial pollutants and even desert sand can lead to costly power interruptions. Midsun High Voltage Insulator Coating (HVIC) provides a significantly maintenance-reduced protective layer in contaminated environments that can prevent excessive current leakage, tracking and flashovers on any type of high voltage insulator.

Features:

- Hydrophobic
- High resistance to arcing and corona
- Resistance to atmospheric and chemical degradation
- UV resistance
- Suppression of leakage current, discharges and pollution flashover
- Non toxic and environmental friendly material
- High resistance to air, airborne pollutants, rain, and humidity



Visit midsungroup.com/midsun-hvic or scan QR to learn more







HVIC TECHNICAL DATA

Property	Value	Method
Appearance	Thick paint	
Viscosity, cP	2100-3300	
Cure System	Neutral, moisture cure (Cured At Standard Conditions* for 7 Days)	
Dielectric Strength, kV/mm, 0.375 mm (15th) thickness	27.1	ASTM D149
Volume Resistivity, ohm.cm	3.2 x 10 ¹³	ASTM D257
Surface Resistivity, ohm/square	4.2 x 10 ¹³	ASTM D 257
Dissipation Factor	0.028 at 100 Hz 0.0057 at 100 kHz	ASTM D150
Dielectric Constant	3.57 at 100 Hz 3.36 at 100 kHz	ASTM D150
Tracking Wheel 1000 hour Withstand (CEA LWIWG-01)	Pass	
Dry Arc Resistance	Track: 200 s, Burnout: >420 s	ASTM D495
Temperature stability	-40°F to 480°F (-40°C to 250°C)	
Thermal Expansion Coefficient	250	
Loss Tangent at 100 Hz	0.028	ASTM D150
Water Repellency Angles, degrees	Static: 124 Advancing: 123 Receding: 105	IEC 62073
5000 hour UV & Salt Fog Accelerated Weathering	No degradation	IEC61109
Elongation at break	% 0.375 mm (15th) thickness	ASTM D 412
Tear strength	Die B, Ib/in (kN/m), 0.375 mm (15th) thickness	ASTM D624
Inclined Plane Tracking & Erosion Test	1A 4.5; 1B 4.5	IEC 60587
Adhesion Testing, Water blast test	Pass	IEEE 957
Adhesion Testing, 100 h boiling water	Pass	CEA LWIWG-02

These figures are only intended as a guide and should not be used in preparing specifications.





HVIC ENERGIZED

Midsun HVIC modified to allow for energized applications.

Features:

- Reduces costly maintenance shutdowns
- Reduces unnecessary wear and tear to system backup units
- High resistance to extreme temperatures, salt and corrosive environments
- Not affected by UV light, corona discharge or chemical contaminants
- Reliance on peak loading generation
- Mitigate pollution caused outages



E/PAINTABLE INSULATION

This advanced silicone rubber formula provides high dielectric strength insulation as a paintable coating, offering protection against wildlife contact.

Features:

- High dielectric strength
- Easy to apply one coat application
- Excellent atmospheric and chemical resistance





OUR SERVICES

TURNKEY APPLICATION

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Midsun field specialists are standing by and ready to implement any animal mitigation or coating product we provide into your new or existing system.



TRAINING & SUPERVISION



Midsun offers extensive professional training services to certify companies as official applicators of our products. If training is not required, we can also supervise the project.







CONSULTING

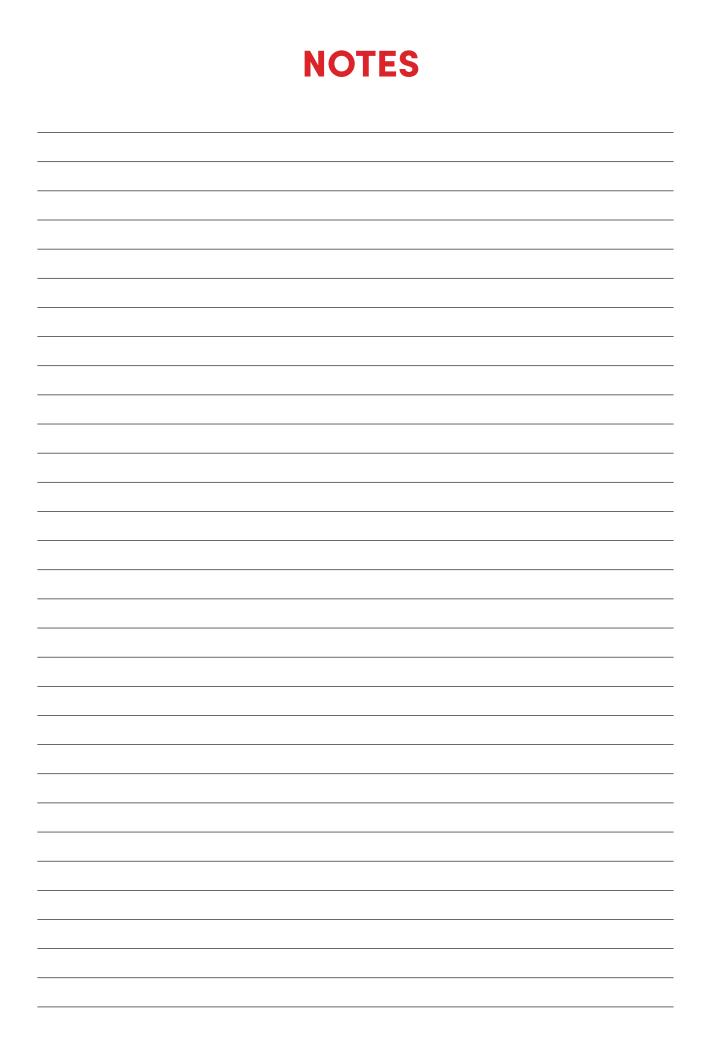
Our technical consultants can help you define and execute an implementation plan based on your specific requirements. These services include developing and implementing target operating / service models and optimizing application processes to reduce costs and improve productivity.

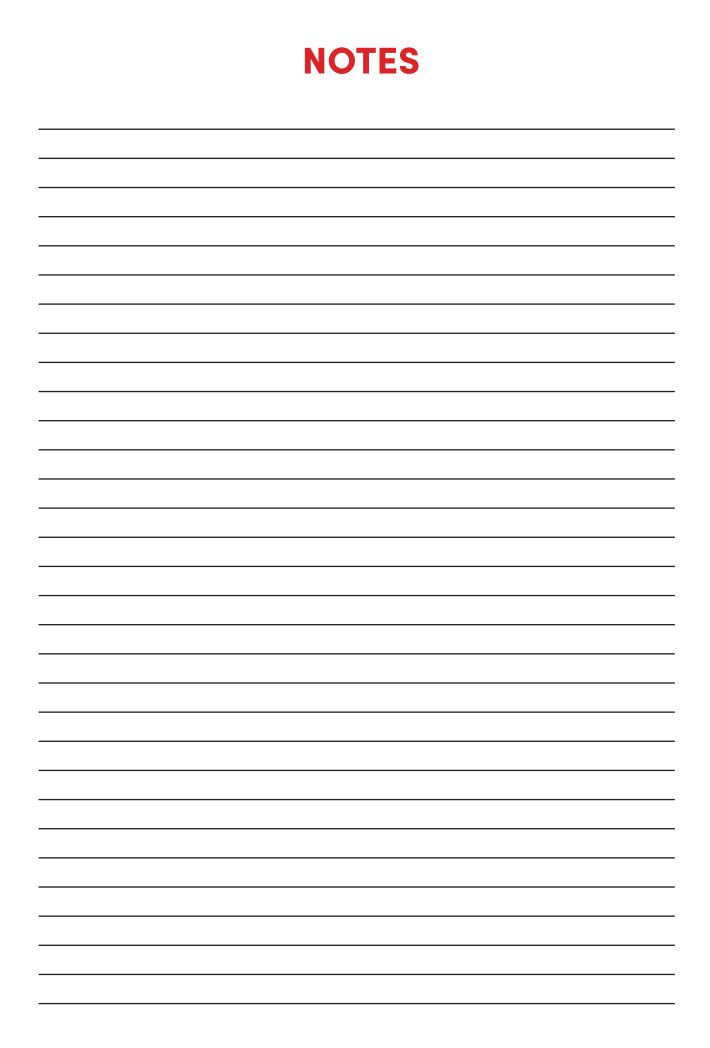


OUR EXPERTISE AREAS

- Operations and manufacturing
- Maintenance and reliability
- Engineering and product development
- Quality management









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