

# Parker Chomerics Product Overview

## Thermal Interface Materials



### Thermally Conductive Gels

#### THERM-A-GAP™ GELS

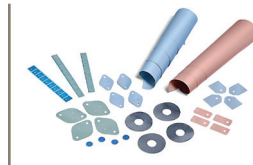
Parker Chomerics THERM-A-GAP GELS are supplied as pre-cured, single component compounds that can be dispensed over the heat generating component. These unique gel materials result in much lower mechanical stress on delicate components than even the softest gap-filling pads. They are ideal for filling variable gaps between multiple components and a common heat sink.



### Thermally Conductive Gap Filler Pads

#### THERM-A-GAP™

Parker Chomerics commercial grade thermal insulator pads are designed for use where solid thermal and electrical properties are required at an economical price. These products are offered as dry pads, or with an optional adhesive (PSA) layer for attachment. Materials with PSA are available die-cut on continuous rolls. Versions are offered with either polyimide or fiberglass reinforcement to protect pads against tear, cut-through and punctures.



### Thermally Conductive Electrical Insulator Pads

#### CHO-THERM®

Parker Chomerics thermally conductive pad selection includes dielectric insulating pads for use as alternatives to greased mica insulators between discrete power devices and heat sinks. Also available are low-modulus, thermally conductive silicone and non-silicone gap filler pads for semiconductor applications where heat must be conducted over large, variant gaps between components and heat-dissipating surfaces.



### Thermally Conductive Cure-In-Place Potting and Underfill Materials

#### THERM-A-FORM™

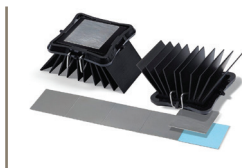
Parker Chomerics THERM-A-FORM thermally conductive silicone elastomer products are dispensable form-in-place compounds designed for heat transfer without excessive compressive force in electronics cooling applications. These versatile liquid reactive materials can be dispensed and then cured into complex geometries for cooling of multi-height components on a PCB without the expense of a molded sheet. Each compound is available in ready-to-use cartridge systems, eliminating weighing, mixing and degassing procedures.



### Thermally Conductive Attachment Tapes

#### THERMATTACH®

Parker Chomerics THERMATTACH tapes are formulated with acrylic or silicone based pressure sensitive adhesive (PSA) loaded with thermally conductive fillers. They are designed to securely bond heat sinks to power dissipating components without requiring an additional clamping mechanism.



### Thermally Conductive Phase Change Materials

#### THERMFLOW®

Parker Chomerics THERMFLOW phase-change Thermal Interface Materials (TIMs) completely fill interfacial air gaps and voids. They also displace entrapped air between power dissipating electronic components. Phase-change materials are designed to maximize heat sink performance and improve component reliability.



### Thermally Conductive Greases

Parker Chomerics thermal greases offer a range of performance options covering the simplest to the most demanding thermal requirements. These materials are screened, stenciled or dispensed and require virtually no compressive force to conform under typical assembly pressures. The excellent surface wetting results in low interfacial resistance.

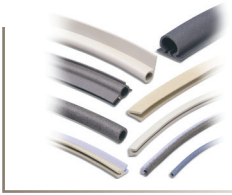


### Thermally Conductive Heat Spreaders

#### T-WING®

Parker Chomerics family of thin heat spreaders provides a low-cost, effective means of cooling IC devices in restricted spaces where conventional heat sinks are inappropriate.

# EMI Shielding Materials



## Electrically Conductive Elastomer Gaskets

### CHO-SEAL®

Parker Chomerics EMI shielding elastomer gaskets come in sheets, extrusions, molded, and in custom sizes, and are the superior choice for elastomeric seals, corrosion resistance, environmental sealing, and cost effective electronic shielding.



## Electrically Conductive Form-In-Place Material Gaskets

### CHO-FORM®

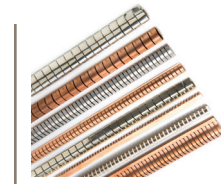
Parker Chomerics robotically dispensed Form-In-Place (FIP) EMI shielding gaskets provide the lowest total cost of ownership for small cross section and complex pattern applications. Parker Chomerics CHOFORM (conductive) and ParPHorm (non-conductive) FIP materials can reduce installed cost of an EMI gasket by up to 60%.



## Fabric Over Foam Gaskets

### SOFT-SHIELD®

Parker Chomerics product line family of SOFT-SHIELD EMI gaskets provides a selection of strip and sheet stock commercial EMI gasket solutions suitable for most all indoor EMI shielding and grounding applications. These products rely on the unique construction of a conductivity-plated fabric or wire mesh, wrapped or knitted over a low closure force urethane foam.



## Fingerstock Gaskets

### SPRING-LINE®

Parker Chomerics Fingerstock offers superior shielding for large compression ranges due to mounting surface variability.



## Wire Mesh Gaskets

### MESH STRIP

Parker Chomerics offers one of the broadest selections of metal-based gasket solutions available anywhere for ElectroMagnetic Interference (EMI) and ElectroMagnetic Pulse (EMP) shielding as well as lightning strike protection. These products include three distinct families; knitted wire, oriented wire in silicone and expanded metal.



## Metalastatic Gaskets

### METALASTIC®

Parker Chomerics METALASTIC gaskets are a family of metal-based gasketing technologies available with or without elastomer binder. Material is produced in thin sheets that can be cut into custom geometries to meet application-specific needs.



## Oriented Wire Gaskets

### POLA®

Parker Chomerics POLASHEET and POLASTRIP gasketing are composite EMI shielding and weather sealing materials. Either solid or sponge silicone may be specified as the weather seal.



## Electrically Conductive Paints

### CHO-SHIELD®

Parker Chomerics family of EMI Shielding Paints are designed for application on a wide variety of surfaces for challenging environments when a conductive surface is desired. Adhesion to plastics and metals provides excellent EMI shielding. Integrated circuits can be EMI shielded at the board level utilizing high-performance paints.



## Electrically Conductive Sealants

### CHO-BOND®

Parker Chomerics family of CHO-BOND electrically conductive sealants/gap fillers provides a variety of solutions for solving EMI problems beyond that which can be addressed simply with EMI gasketing.



## Electrically Conductive Adhesives

### CHO-BOND®

Parker Chomerics family of CHO-BOND electrically conductive adhesives provides a variety of solutions for solving EMI problems beyond that which can be addressed simply with EMI gasketing.



## Adhesion Promoting Primers

### CHO-BOND®

Parker Chomerics family of adhesion promoting primers are utilized to improve the adhesion to low surface energy plastic parts in preparation for application of a Parker Chomerics electrically conductive paint.

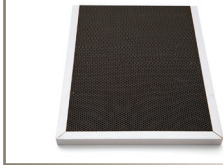


## Electrically Conductive Grease

### CHO-LUBE

Parker Chomerics family of CHO-BOND electrically conductive greases provides a variety of solutions for solving EMI problems beyond that which can be addressed simply with EMI gasketing.

*EMI Shielding Materials  
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## EMI Shielded Air Ventilation Panels

### STREAMSHIELD OMNI-CELL® SHIELD-CELL

Parker Chomerics family of shielded air ventilation panels consists of several product variations. Shielded air ventilation panels, also known as shielded honeycomb vent panels, provide adequate air flow for cooling purposes in electronic enclosures while preserving the necessary EMI shielding.



## Electrically Conductive Plastic Pellets And Injected Molded Plastic Solutions

### PREMIER™

Parker Chomerics PREMIER family of materials are electrically conductive thermoplastics for plastic enclosure EMI shielding solutions. The polymer alloys (PC-ABS or PBT-PC) and conductive fillers are engineered for stable electrical, mechanical and physical performance.



## Metal Foil Tapes

### CHO-MASK®, CHO-FAB & CHO-FOIL®

Parker Chomerics CHO-FOIL metal foil tapes provide an economical solution to applications requiring excellent electrical conductivity across substrates. These foil tapes can provide a low impedance connection between a braided cable shield and the metal connector backshell in molded cables. Due to the highly conductive pressure sensitive acrylic adhesive (PSA), the tape can provide an effective shielded cable assembly without the need for soldering the tape to the braid.



## EMI Shielding Engineered Laminates

### CHO-STRAP®

Parker Chomerics family of engineered laminates for EMI shielding and grounding consist of foil and film dielectrics adhesively joined for a custom laminate solution. The electrically conductive portion includes: aluminum, copper, or tin-plated copper foil; nickel-plated copper, polyester taffeta; nickel-plated silver, nylon taffeta; and nickel-plated silver, nylon rip-stop. Available dielectrics include: mylar, PVC, polypropylene (Formex™) and Kapton®. Adhesive offerings include: acrylic, electrically conductive acrylic, fire retardant conductive acrylic and silicone.



## Electrically Conductive Heat Shrinkable Tubing

### CHO-SHRINK®

Parker Chomerics CHO-SHRINK is formulated and manufactured for commercial EMI cable shielding applications to provide low cost, light weight, 360° EMI shielding for cables, transitions, connectors and terminations. CHO-SHRINK's ease of application reduces assembly costs and provides a reliable, professional looking EMI cable shielding solution for electronic equipment.



## Microwave Absorber Materials

### CHO-MUTE®

Parker Chomerics CHO-MUTE 9005 and 9025 elastomer based absorber materials are designed to offer a user-friendly approach to the reduction of unwanted electromagnetic radiation from electronic equipment as well as minimize cavity-to-cavity cross coupling and microwave cavity resonances. Comprised of a silicone elastomer matrix with ferrous filler material, these materials provide RF absorption performance over a broadband frequency range from 500 MHz to 18 GHz.



## EMI Attenuating Ferrite Cable Chokes

### CHO-SORB®

Parker Chomerics cost-effective CHO-SORB EMI ferrites reduce conducted emissions and ESD susceptibility on signal lines and power cables without affecting data transmission. They are widely used in computers, printers, keyboards, PBXs, CATVs, radio and television receivers, medical electronics, and data communications equipment. Unlike cable shields, CHO-SORB attenuators do not require grounding.

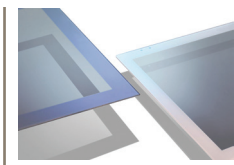


## EMI Shielding Cable Wrap

### SHIELD WRAP

Parker Chomerics high quality flat cable jackets are designed to attenuate RF signals and bring digital electronic devices into EMC compliance at an attractive cost.

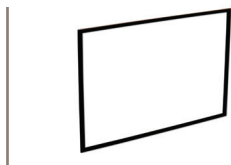
*EMI Shielding Materials  
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## Glass Windows for Displays

### WIN-SHIELD®

Parker Chomerics Duralan G, Duralan G XL, WIN-SHIELD G and WIN-SHIELD G Heaters are high-performance glass products that deliver superior clarity with ultra-low reflection. High performance AR coatings allow for maximum light transmission and crisp images. Incorporation of EMI shielding with ITO coatings with high transparency allow for unobstructed viewing. Duralan G XL products are used in digital signage applications for large format LCD systems for indoor or outdoor use.



## Plastic Windows for Displays

### Duralan™ & WIN-SHIELD®

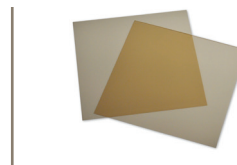
Parker Chomerics plastic window offerings serve as resistive and projective capacitive surfaces for LCD touchscreens, providing protection against scratching, breaking, solvents, harmful chemicals and exposure to harsh environments. They are available in EMI-shielded versions.



## Custom Screen Protectors for Industrial Displays

### Duralan™

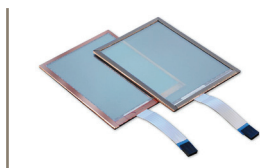
Parker Chomerics can make custom-sized screen protectors for a wide variety of industrial applications requiring protection of touch surfaces. This process utilizes the same materials as used for protection of touchscreen mobile devices.



## EMI Shielding Film

### TECKFILM™

Parker Chomerics EMI shielding film is a highly conductive optical quality polyester film used in display applications requiring EMI shielding and transparency. Use for simple shielding applications or retrofit applications.



## EMI Shielding Touchscreens

### CHO-TOUCH™

Parker Chomerics EMI-shielded touchscreens combine state-of-the-art touchscreen technologies (PCAP and Resistive) with Parker's industry leading EMI-shielding capability.



## Standard Integrated Touchscreen LCD Displays

### CHO-TOUCH™

Parker Chomerics standard integrated touchscreen LCDs are durable, integrated, optically bonded touchscreens and LCD units that save assembly time.



## Test Services for EMC Compliance and Safety

Parker Chomerics offers a wide variety of EMI/EMC and safety testing for regulatory compliance. Tests include FCC, EC, VCCI, IEC 1000 (formally 801) EN 61000 Series, CISPR, Austel, MIL-STD-461 and EU regulations.

Parker Chomerics is a global leader in the development and application of electrically conductive and thermal interface materials. Engineers and designers from every industry including aviation, telecommunications, life science, defense, commercial and consumer electronics choose Parker for its strong product portfolio, which utilizes technology built on core competencies in material science and process technology.

As a Division of the Parker Hannifin Corporation Engineered Materials Group, with stocking and fabrication capabilities on five continents, our products are available when and where you need them. Expanded production capacity, experienced personnel, and a robust communications and information infrastructure allow us to respond to an increasingly global demand for our products and services.

**For further information, visit [www.parker.com/chomerics](http://www.parker.com/chomerics) or call +1 781-935-4850.**