Score IT
Fold IT
Bend IT

Depend on IT!

Flame Retardant Electrical Insulation and Barrier Materials
Formex™ Flame Retardant Electrical Insulation Materials

- Score and Fold to Fabricate Economical 3-Dimensional Parts
- Fold Repeatedly Without Cracking or Splitting
- High Dielectric Breakdown Strength
- UL 94 V-0 Flame Class; RoHS Compliant
- Non-hygroscopic; Superior Chemical Resistance

ITW Formex® flame retardant materials provide superior electrical insulation in industrial and consumer electronic equipment. The material is available in rolls, sheets and panels and can be easily fabricated into a wide range of shapes.

No other flame retardant, electrical insulating material can match the flexibility and performance of Formex™ for cost-effective fabricated parts. Formex™ has successfully replaced a variety of electrical papers, thermoplastic materials, and injected molded parts.

Formex™ GK
Extruded Sheets – 0.005 to 0.062 in. thick (0.127 to 1.57mm).
Superior dielectric strength.
Continuous use temperature to 115°C.

Formex™
Extruded Sheets – up to 0.125 in. thick (3.18mm).
Continuous use temperature to 110°C.

Statex™
Extruded Sheets – 0.010 to 0.031 in. thick (0.25 to 0.79mm).
Static dissipative ESD protection.
Continuous use temperature to 110°C.

PEP
Profile Extruded Panels – 0.160 and 0.240 in. thick (4 and 6mm).
Rigid, lightweight panels.
Continuous use temperature to 115°C.

Note: Above sizes are standard; custom sizes also available.
Processing Methods

**Die Cutting** Including steel rule, engraved, rotary and male/female dies.

**Laser or Water Jet Cutting** Advancements in technology provide rapid prototyping as well as high-speed production.

**Heat Forming** Low-cost tooling and a simple process combine to produce parts with permanently formed angles.

**Thermoforming** Produces complex, rigid, three-dimensional shapes.

**Machining** Materials are easily fabricated with conventional machining techniques.

Additional Processing

**Marking** Materials may be embossed or printed to display product identification, part numbers, safety messages or technical information.

**Lamination** Laminating with aluminum or copper foil provides EMI/RFI shielding.

**Adhesives** Formex™ readily accepts adhesives for various applications.

**Welding** Formex™ can be bonded to itself using conventional plastic welding techniques.

**Joinery Methods** Parts can be easily designed to incorporate a number of joining and fastening methods, often eliminating external fasteners.

Features and Benefits

**UL 94 V-0 Flame Class Rating**
Meets global safety standards

**Excellent Score and Fold**
Parts will not crack or split and ship flat to save freight costs

**Non-Hygrosopic**
< 0.06% moisture absorption

**Cost Effective**
Lower overall part cost with thinner materials

**Chemical Resistance**
Maintains mechanical/electrical properties

**Static Dissipative**
10' to 10' Ohms per sq. surface resistivity

**Superior Dielectric Breakdown Strength**
24,820V @ 0.017 in. (0.43mm)

**Static decay < 2 sec.**

Markets

ITW Formex® is a cost-effective UL 94 V-0 flame retardant electrical insulator in:

- Computers and computer peripherals
- Conventional and uninterruptible power supplies
- Electrical and power distribution systems
- Telecommunications equipment
- Medical equipment
- Automotive components
- Consumer products
- Lighting
- TVs and appliances
- Automotive components
- Consumer products
- Lighting
- TVs and appliances
Global Standards

Environmental

- RoHS - Restriction of Hazardous Substances Directive (EU)

Compliance

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About ITW (Illinois Tool Works)

ITW Corporation is a Fortune 200 Company with headquarters in Glenview, Illinois and more than 750 independent operating divisions in over 50 countries. ITW is an innovative company with many patented inventions including the common self-locking plastic buckle, six-pack securement rings, zipper bag technology and many others. Formex® Insulation Material was developed by the ITW Technology Center in 1985. Headquartered near Chicago, ITW Formex® provides technical and sales assistance, distribution, and production globally from multiple locations in the United States and Asia.

Technical Literature

CONTACT US FOR FREE PRODUCT SAMPLES