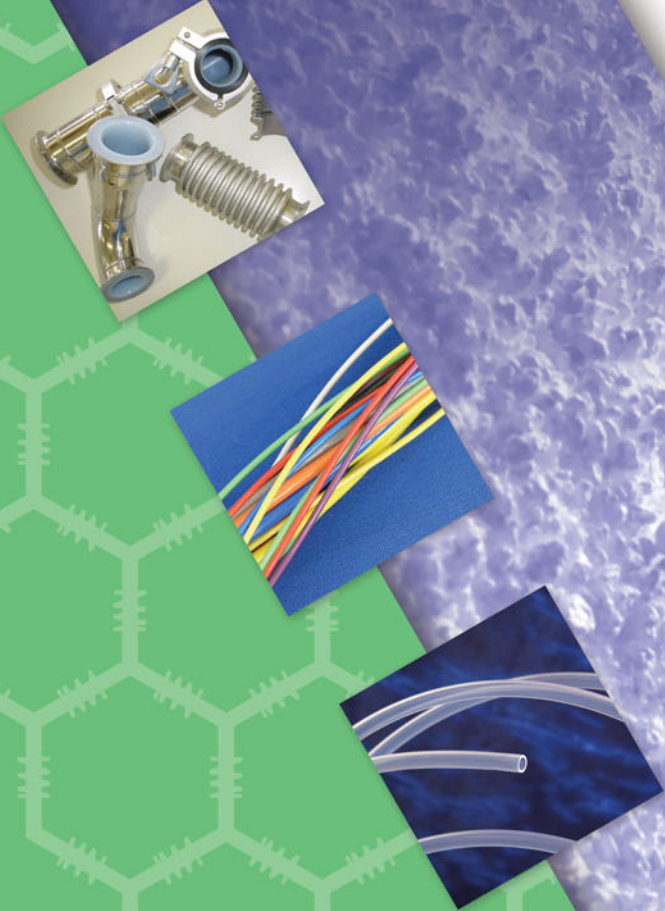


AGC

Fluon® ETFE
Resins & Compounds

 **Fluon®** ETFE



AGC Chemicals Americas, Inc. offers the world's broadest range of high performance fluorochemicals including fluoropolymer resins, custom compounds, fluoroelastomers and specialty chemicals. As a wholly-owned subsidiary of the century-old Asahi Glass Company in Japan, AGC Chemicals Americas, Inc. formed in 2004 as a merger between Asahi Glass America and Asahi Glass Fluoropolymers.

In 1999, AGC purchased the fluoropolymer resins and compounding division from ICI and prior to that, our company was operated through LNP Engineering Plastics. Our manufacturing plants are located in Japan and the United Kingdom. Custom made products are produced in Thorndale, Pennsylvania.

Our Commitment to Quality

As an **ISO 9001** and **14001** registered and certified company, we embrace a Quality Philosophy of total dedication to continuous improvement. How we achieve this is by focusing on our customers' needs through partnerships and teamwork.

We are committed to valuing your feedback as an opportunity to improve our processes, products and ultimately your satisfaction.

Fluon® ETFE Resins

AGC is the World's Largest Producer of ETFE Resins!

No other company can make this claim. More importantly, this fact is further demonstrated by our expansion efforts, broad range of global networks, and sophisticated distribution channels. We are committed to supplying the world with a wide array of high performance ETFE resins, powders, coatings and custom blends.

Fluon® ETFE Is One Tough Fluoropolymer...

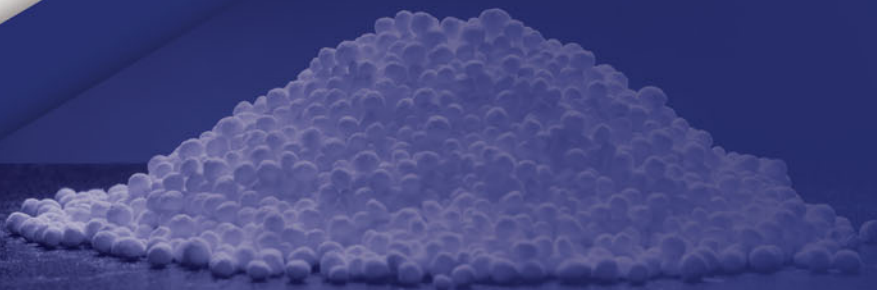
Fluon® ETFE is a melt-processable copolymer of tetrafluoroethylene and ethylene. Fluon® ETFE possesses a unique combination of desirable properties such as higher resistance to heat and chemical attack and outstanding physical toughness. It is processable by conventional extrusion, injection molding, blow molding, rotomolding, rotolining, and electrostatic coating. It is available in a variety of forms including pellets, beads and powders. We offer standard ETFE, low melt ETFE, adhesive ETFE, and custom compounds made with ETFE. Fluon® ETFE is the only ETFE in the world that is FDA compliant and it meets the UL Standard 94V-0 for non-flammability conformance.

• Typical Applications

- Wire and cable coatings
- Semiconductor and electronic components
- Valves, fittings and pump housings
- Film and sheets
- Tubing and pipe
- Electrostatic coatings
- Rotolined vessel linings
- And more...

Our Pledge to the Environment: Chemistry for a Blue Planet

AGC Chemicals is committed to creating a safe, secure, comfortable and environmentally friendly world with chemical technology and we have adopted this pledge as our company's vision. Our Fluon® ETFE resins have always been manufactured without the fluorosurfactant, PFOA.



*C-88AXMP conditions: 2.095 mm (0.0825) orifice

Pellet and Bead Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
C-55AP	3.9 - 6.5	General purpose extrusion, injection molding Maintains mechanical, electrical properties, excellent chemical & heat resistance
C-55AXP	3.9 - 6.5	Extrusion, injection molding Better stress crack resistance over C-55AP
C-88AP	9 - 12	High flow extrusion, injection molding Maintains mechanical, electrical properties, excellent chemical & heat resistance, higher melt flow
C-88AXP	9 - 12	High flow extrusion, injection molding Better stress crack resistance over C-88AP
C-88AXMP	27 - 43 *	Very high flow extrusion, injection molding of thin-walled parts Similar to C-88AXP with higher MFR
Low Melt Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
LM-720AP	10 - 20	Injection molding and film extrusion Low melt point, improved processability, better crack resistance over LM-730AP
LM-730AP	20 - 30	General purpose extrusion, injection molding Lower melt point, improved optical clarity, better flexibility
LM-740AP	30 - 40	General purpose extrusion, injection molding Higher flow than LM-730AP
Heat Resistant Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
HR-907	5 - 10	General purpose extrusion, injection molding Low-flow, superior thermal stability, high heat resistance to 200° C
HR-930	25 - 35	General purpose extrusion, injection molding High-flow, superior thermal stability, high heat resistance to 200° C
Adhesive & Automotive Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
AH-2000	20 - 27	Non-conductive adhesive grade, conventional extrusion methods - fuel hoses Adhesive and anti-stick properties, simplified processability, chemical resistance
AH-2100	25 - 40	Non-conductive adhesive grade, conventional extrusion methods – fuel hoses Strong adhesion to polyamide polymers, higher permeation resistance than AH-2000
AH-3000L	4 - 8	Conductive adhesion grade, conventional extrusion methods – fuel hoses Superior stress-cracking properties, impossible to peel from substrate
AH-5000	18 - 33	Non-conductive adhesive grade, conventional extrusion methods – fuel hoses Strong adhesion to polyamide polymers, high permeation resistance
CB-8015X	1 - 10	ETFE and conductive carbon black, conventional extrusion or injection molding Anti-static, withstands harsh environments
Electrostatic Coating Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
Z-8820X	7 - 14	Electrostatic coating – thin wall (30-50 microns); fluidized bed dip coating Non-stick properties
TL-081	20 - 30	Electrostatic coating – thick walls, severe conditions Anti-cracking, high fluidity, high heat resistance
Rotolining / Rotomolding Grades	Melt Flow Rate ASTM-D3159	Applications and Attributes
ZL-522F	9 - 12	Rotomolding & rotolining Clear, high abrasion resistance, thermally stable
TL-581	20 - 30	Rotomolding & rotolining Anti-cracking, high fluidity, high heat & abrasion resistance
LM-2300N	20 - 30	Rotomolding & rotolining Smooth surface, low melting temperature, chemical resistance

Customized Fluon® ETFE Product Solutions Designed for Your Demanding Applications

Color Concentrates

Color Concentrates are used for color-coded wire insulation, tubing, films, and injection molded parts. Properties include superb surface finish, color consistency and dispersion – even at high extrusion rates. Standard colors available include White, Orange, Blue, Green, Brown, Red, Black, Yellow, Violet, and Gray; custom colors available upon request.

Adhesive Grades

Adhesive compounds are modified ETFE used in applications where strong adhesion to polyamide polymers, especially nylon 12, is required. These compounds also exhibit high permeation resistance to many fluids and gases, especially automotive fuels.

Foam Concentrates

Foam Concentrates are designed for gas injection foaming used for manufacture of LAN and coaxial cable. We can also customize foam concentrates to meet your application parameters. The properties of foamed insulation help minimize signal loss, enhance high-speed data transmission, save weight and material, potentially resulting in a cost savings to you.

Cross-linkable Compounds

Cross-link compounds are used for insulating air frame, industrial and shipboard wiring. These compounds are also used where high temperature, abrasion resistance and cut-through resistance are important considerations. These products are manufactured as ready-to-use and may be pigmented.

Conductive/Anti-Static Compounds

Made with ETFE and Carbon, conductive compounds are used for control of heat and static electricity. Wire coated with a conductive fluoropolymer may be used to wrap and thaw frozen pipes, or to locate pipeline leaks by detecting thermal change or as static dissipative fuel lines.

Reinforced Compounds

Reinforced compounds incorporate glass fibers, carbon fibers, or mineral fillers for enhanced dimensional stability, toughness, abrasion resistance, shrinkage resistance and thermal conductivity characteristics.

Lubricated Compounds

Lubricated compounds contain lubricious fillers such as FEP or PTFE for applications requiring low-friction, abrasion-resistant surfaces or linings, such as push-pull cable for car or truck brakes.

Flexible AR Compounds

Flexible AR compounds are based on ETFE and a proprietary fluoroelastomer where many of the desirable properties of ETFE are maintained but in a more flexible form. These materials are ideal for applications such as wire and cable (automotive, industrial, aerospace, transit and appliance markets), films and sheets, tubing and pipe, as well as electronic components.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process.

NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER.

The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.

When Quality Counts Most

Test	Units	Method Used
Melt Flow Rate	g/10 minutes	ASTM D-3159
Bulk Density	grams/liter	ASTM D-1895
Filler Content	%	AGC Internal
L* (Lightness)	(CIELAB, 10*obs, D65)	AGC Internal
a* (Red-Green)	(CIELAB, 10*obs, D65)	AGC Internal
b* (Yellow-Blue)	(CIELAB, 10*obs, D65)	AGC Internal
Pellet Diameter	Inches	AGC Internal
Dispersion Quality	Microns	AGC Internal
Volume Resistivity	Ω -cm	ASTM D-257

Before it leaves our door, every lot of material is subject to a thorough testing regime to ensure the best quality and consistency from lot to lot. We supply test data with each shipment and typical tests are listed here; other test data can be supplied upon request.

Supply Chain Management Solutions Created with Your Needs in Mind

AGC Chemicals distributes standard grades of ETFE as well as manufactures custom blends. A large assortment of products is stocked at our satellite warehouses across the country and our custom compounds are stocked at our production facility in Southeastern Pennsylvania. By maintaining a steady supply stream of high quality and consistent products through our sophisticated ERP system, we can get you what you need when you need it.

We offer our customers optimized freight and packaging solutions to keep transit costs down and inventory control as a priority. Our clearly labeled, sturdy packaging will keep your material free of debris and easily identifiable. A dedicated and cross-functional Customer Service staff as well as knowledgeable Technical Sales Representatives will support your business and strive to understand your requirements to ensure your success.

Comprehensive Technical Solutions

At our state of the art technical center in Exton, Pennsylvania, AGC Chemicals offers personalized technical support and R&D by our industry experts with decades of experience. In addition to global support, our USA technical facility is located in proximity to our production plant, which allows us to align our engineering resources, thereby enhancing our material solutions for our customers.

Application development and product enhancement

- **Formulating and compounding samples using single and twin screw technology**
- **Injection and compression molding equipment**
- **Film line with 3-roll stack and 12" film die**

Examples of testing capabilities for Fluon® ETFE Resins & Compounds

- **Physical Testing**
 - Instron: tensile and flexural properties at room and elevated temperatures
 - Drop weight impact
 - Conductivity meter
 - Spectrophotometer
 - Optical microscope
- **Thermal & Analytical Testing**
 - Differential Scanning Calorimetry (DSC)
 - Thermogravimetric Analysis (TGA)
 - Dynamic Mechanical Analysis (DMA)
 - Fourier transform infrared spectroscopy (FTIR)
 - Capillary Rheometry
 - MFR Indexer

For more information about our company, products and services, please visit our website at www.agcchem.com

- Compliance certifications
- Organizational affiliations
- Technical data and MSDS for standard product grades
- Processing guidelines, recommendations and safe handling guidelines
- Brochures, news and tradeshow schedules
- Technical papers, webinars and announcements



Fluon® ETFE

AGC Chemicals Europe, Ltd.

PO Box 4
Thornton Cleveleys
Lancashire FY5 4QD United Kingdom
Tel: +44 (0) 1253 861951
Fax: +44 (0) 1253 861950
www.agcce.com

**AGC Chemicals
Asahi Glass Co., Ltd.**

Shin-Marunouchi Bldg, 1-5-1 Marunouchi
Chiyoda-ku, Tokyo 100-8405 Japan
Tel: +81-3-3218-5875
Fax: +81-3-3218-7856
www.agc.com

AGC Chemicals

Chemistry for a Blue Planet

AGC Chemicals Asia Pacific Pte., Ltd.

460 Alexandra Road, #30-02
PSA Building
119963 Singapore
Tel: +65-6273-5656
Fax: +65-6276-8783

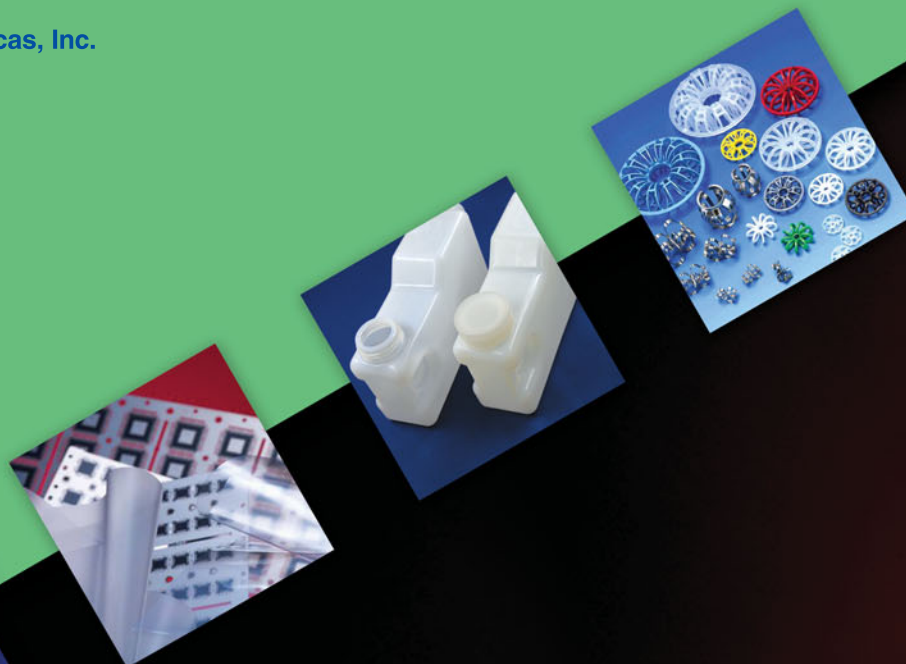
AGC Chemicals Trading (Shanghai) Co., Ltd.

Room 2307-2308, Rui An Plaza
333 Middle Huai Hai Road
Shanghai, 200021 China
Tel: +86-21-6386-2211
Fax: +86-21-6386-5377

AGC Chemicals Americas, Inc.

Thorndale Plant

255 South Bailey Road
Downingtown, PA 19335



AGC

AGC Chemicals Americas, Inc.

55 E. Uwchlan Avenue, Suite 201
Exton, PA 19341
United States of America

Telephone: +1 610-423-4300

Toll Free (US only): 800-424-7833

Fax: +1 610-423-4305

www.agcchem.com

Visit our website for compliance information and industry certifications.

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