



product information

Fluon[®] G307 Granular PTFE Molding Powder

PRODUCT DESCRIPTION

Fluon[®] G307 is a general-purpose molding powder. This grade is composed of relatively large, spherical agglomerates. It is a free-flowing resin with excellent flow characteristics. Articles molded from Fluon G307 exhibit good mechanical properties and surface finish.

TYPICAL APPLICATIONS

- Automatic molding of stock shapes
- Isostatic molding of pipe liners and fittings
- Compression molding of billets and sheets

TYPICAL PROPERTIES

Property	Units	G307
Median Particle Size	Microns	750
Powder Bulk Density	g/l	770
Shrinkage	%	2.70
Tensile Strength (IP units)	psi	5500
Tensile Strength (SI units)	MPa	38
Elongation	%	350

NOTE: The data listed here represents typical values for the stated grades of Fluon PTFE. This information should be used as a guide only and not to establish specification limits or design criteria. AGC Chemicals Americas assumes no obligation or liability for any advice furnished by us or for results obtained with respect to this product. All such advice is provided free of charge and the buyer assumes sole responsibility for results obtained in reliance thereon.

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PROCESSING

Fluon G307 can be molded following generally established procedures. For full details consult the Fluon Technical Service Note F1, “The Molding of PTFE Granular Powders” and F14, “Isostatic Compaction of PTFE Powders.

Molding	Compression ratios: 2.7 Preforming: 4500-5000 psi with slow, steady compression
Sintering	The article must be heated above the gel point of the resin (648°F [342°C]) to achieve complete sintering. Maximum sintering oven temperatures are usually 700°F (371°C) and higher, depending on the wall thickness of the article.

SPECIFICATION CONFORMANCE

Fluon G307 resin conforms to the following industry specifications:

- ASTM D-1457 Type VI, Grade I
- ASTM-4894 Type IV, Grade I
- Federal Food and Drug Administration 21 CFR 177.1550

FDA COMPLIANCE

Fluon Polytetrafluoroethylene (PTFE), when sintered to high temperatures common in the industry, is compliant with the compositional and extraction requirements for United States Federal Food and Drug Administration Regulation (FDA) 21 CFR 177.1550.

USP PLASTIC CLASS VI

Fluon Polytetrafluoroethylene (PTFE) has been submitted for testing according to USP class VI protocol. The material complies with the requirement under USP guidelines for implantation, intracutaneous, and toxicity study. Even though our material meets the requirements, it is always good practice to test material as used in its final platform.

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Testing of the finished part is the responsibility of the manufacture or seller if certification is required.

If additional information is required, please contact the Fluon PTFE Technical Service Department for assistance.

PACKAGING

Fluon G307 is supplied in plastic kegs with 25 kg (55 lbs) per keg.

STORAGE AND HANDLING PROCEDURES

Prior to use, Fluon G307 should be stored in a cool, dry environment, preferably between 59 and 65°F (15 and 18°C). Excessively warm powder will have impaired flow characteristics. Atmospheric moisture may condense on excessively cold powder if a keg is opened in a warm room. Such condensation may cause cracked moldings. The temperature of PTFE powder should not pass through PTFE's transition point (66 – 68°F [19 – 20°C]) during the molding process. If this occurs, cracked moldings may result.

HANDLING PRECAUTIONS

Within its working temperature range, PTFE is a completely inert material, but when heated above 750°F (400°C), it gives rise to gaseous decomposition products or fumes that can produce unpleasant effects if inhaled. Fumes can be produced during the sintering process. The inhalation of these fumes is easily prevented by applying local exhaust ventilation as near to the source as possible.

Smoking should be prohibited in workshops where PTFE is handled because tobacco contaminated with PTFE will, during burning, give rise to polymer fumes. It is therefore important to avoid contamination to clothing, especially the pockets, with PTFE and to maintain a reasonable standard of personal cleanliness by washing hands and removing any PTFE particles lodged under the fingernails.

More information is included in the Technical Bulletin "Guide to the Safe Handling of Fluoropolymer Resins" by The Society of the Plastic Industry, Inc. (SPI)

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The logo for AGC (Asahi Glass Company) consists of the letters "AGC" in a bold, blue, sans-serif font. The letter "A" is slightly larger than the "G" and "C".

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SAFE HANDLING INFORMATION

A summary of the hazards, as defined by OSHA Hazard Communication Standard, 29 CFT 1910.1200 for this product are:

Physical hazards: None

Health hazards: None

FOR ADDITIONAL INFORMATION AND HANDLING INSTRUCTIONS, READ AGC CHEMICALS AMERICAS, INC. MATERIAL SAFETY DATA SHEET.

For more information and samples contact

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