INOFLON®
Fluoropolymers

GN7055

Technical Information

INOFLON® GN7055 is polymerized in an aqueous dispersion medium to produce agglomerated fine dispersion resin. INOFLON® GN7055 grade is ideal grade for tubing, pressure hoses, flexible tubing, cables, reinforced hoses, etc.

Technical Information

- High chemical resistance
- Processable by standard paste extrusion process
- Recommended reduction ratio range: 200 to 1000
- Smooth surface finish
- PFOA Free

Typical Properties of INOFLON® GN7055

Properties	Test Method	Unit	Nominal Value
Powder properties			
Bulk density	ASTM D 4895	g/l	500
Average particle size (d_{50})	ASTM D 4895	µm	475
Processing			
Extrusion pressure (Reduction ratio 400:1)	ASTM D 4895	MPa(psi)	20 (3191)
Mechanical properties			
Std. specific gravity (SSG)	ASTM D 4895	-	2.170
Tensile strength	ASTM D 4895	MPa(psi)	33 (4786)
Elongation	ASTM D 4895	%	330

Note: These are typical properties and not to be used for specification purpose

FDA Compliance

When products made from INOFLON® GN7055 are correctly processed, that is sintered at high temperature practiced by industries, they may comply with FDA Regulation 21 CFR 177.1550 for use in contact with food.

Packaging

INOFLON® GN7055 is packed in 25Kgs plastic drums.

Handling and storage

INOFLON® GN7055 is susceptible to shear damage, particularly above its transition point 19°C (66.2°F). Handling and transportation of the containers could easily subject the powder to sufficient shear to spoil it if the resin temperature is above transition point. To ensure that the resin does not fibrillate, it should be cooled below its transition temperature prior to handling and transportation. A typical commercial container (20–30 kg) should be cooled 24–48 hours to <15°C (59°F) to assure temperature uniformity throughout the container. Specially designed shallow cylindrical drums are used to minimize lump formation, compaction, and shearing of the resin. To prevent moisture contamination, the drum must not be opened where the ambient dew point is above the temperature of resin to avoid immediate condensation on the resin. Storage and handling facilities should be clean. Very small foreign particle are highly visible in the white resin, keep resin drum closed and clean. Good housekeeping and careful handling are essential.

Processing

INOFLON® GN7055 is fabricated by paste extrusion, where PTFE powder is first blended at temperatures below 19°C (66.2°F) with a hydrocarbon lubricant which acts as an extrusion aid. After ageing at about 30°C (86°F) it is then formed into a cylindrical preform at a fairly low pressure and placed inside the barrel of a paste extruder where it is forced through a die with a constant extrusion rate at 30-50°C (86-122°F). The extrudate is passed through multiple ovens and a cooling device where it is first dried, then sintered, and finally cooled. Drying and sintering can be performed continuously "in line" with the extrusion or in separate drying and sintering ovens.

Safety precautions

Handling and processing of PTFE must be done in ventilated area to prevent personnel exposure to the fumes liberated during sintering and heating of the resin. Fumes must not be inhaled and eye and skin contact should be avoided. In case of eye contact flush, with water immediately and seek medical help. Smoking tobacco or cigarettes contaminated with PTFE may result in a flu-like condition including chills, fever and sore throat that may not start until a few hours after exposure has taken place. These symptoms usually pass within about 24 hours. Vapors and gases generated by PTFE during sintering must be completely removed from the factory areas.

Mixtures of some metal powders such as magnesium or aluminum are flammable and explosive under some conditions. Please read the Material Safety Data Sheet and the detailed information in the "Guide to the Safe Handling of Fluoropolymer Resins" published by the fluoropolymer division of the Society of the Plastic Industries available at www.fluoropolymers.org

Note warning: Do not use any of INOFLON® PTFE resins in medical devices that are designed for permanent implantation in the human body. For other medical uses, prior permission of GFL may be sought.

For more information, please contact Gujarat Fluorochemicals Limited

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