

# **Teflon™ Clear PFA Powders**

Industrial Coatings

532G-5010, 532G-5011, 532G-5310, 532G-7000 532G-7410, 532G-7411

# Fact Sheet

PFA powders available as clear mid- or top-coat do offer outstanding temperature resistance, excellent release and high abrasion resistance. Molecular weight (MW) of the powder does influence the resistance to mechanical and/or thermal properties, the higher the MW, the higher the resistance of the polymer to fatigue / stress-cracking.

# **Property Data 1**

532G-5010	532G-5011	532G-5310	532G-7000	532G-7410	532G-7411
Clear	Clear	Clear	Sparkling Clear	Clear	Clear
Standard	Standard	Med High	Standard	High	High
18.6	18.6	18.6	18.6	18.6	18.6
31 - 50	18 – 35	31 - 50	31 – 50	31 - 50	24 - 29
58 - 92	57 – 87	57 - 100	48 – 92	48 - 95	48 - 95
2.15	2.15	2.15	2.15	2.15	2.15
0	0	0	0	0	0
260 (500) continuous use & 290(555) intermittent					
Negative between 0.154 – 1.54 g/l no dust explosion risk					
	Clear Standard 18.6 31 - 50 58 - 92 2.15	Clear Clear   Standard Standard   18.6 18.6   31 - 50 18 - 35   58 - 92 57 - 87   2.15 2.15   0 0   260 (\$	Clear Clear Clear   Standard Standard Med High   18.6 18.6 18.6   31 - 50 18 - 35 31 - 50   58 - 92 57 - 87 57 - 100   2.15 2.15 2.15   0 0 0   260 (500) continuous use	Clear Clear Clear Sparkling Clear   Standard Standard Med High Standard   18.6 18.6 18.6 18.6   31 - 50 18 - 35 31 - 50 31 - 50   58 - 92 57 - 87 57 - 100 48 - 92   2.15 2.15 2.15 0 0   0 0 0 0 0	Clear Clear Sparkling Clear Clear   Standard Standard Med High Standard High   18.6 18.6 18.6 18.6 18.6 18.6   31 - 50 18 - 35 31 - 50 31 - 50 31 - 50 31 - 50   58 - 92 57 - 87 57 - 100 48 - 92 48 - 95   2.15 2.15 2.15 2.15 2.15   0 0 0 0 0

<sup>1</sup>Physical constants are averages only and are not to be used as product specifications. They may vary up to ±5% of the values shown

<sup>2</sup>Theoretical coverage at dry film thickness (DFT) of 1.0 mils (25µ) based on 100% application efficiency. It does not take normal production losses into account

 $^{3}$  Particle size refers to the average particle size measured by laser diffraction.

 $^4$  Weight % Volatiles based on volatiles with vapor pressure >= 0.1 hPa

## **Application Method**

General Primer	420G-7xx (do not use 420G-42x because of adhesion failure with PFA). Apply powder in dry conditioned spray booth, avoid contact with moisture
Screen	Through a 60 mesh (approx. 250 μm) screen
Powder supply Settings	Use fluidized bed with or without vibration system. Depends on powder quantity and particle size of the powder. On flat and/or conductive parts high voltage and higher amperage can be used; Voltage: 20-80 kV Amperage: higher than 10 μA if needed. On insulated and complex parts amperage should be lowered typical indication: 6- 10 μA. The gun settings depend on the gun type and the complexity of the part. The given settings are indicative for Gema Optiflex (Optistar) electrostatic gun: Product supply: 30%-50% Air carrier: 3.0 Nm <sup>3</sup> /h Electrode fluidization: flat jet 0.2 Nm <sup>3</sup> /h Amperage: 10 μA Voltage: 60 KV
Recommended DFT*	25-60 μm/coat
Drying	Powders can be applied dry on wet on the primer. Then solvents should be flashed off 5-10 min. at 150- 170°C
Curing (metal temp.)	20-30 min. at 380°C. Bake temperature of the first coat is very important for the adhesion.
Multiple coats	The powder can be hot flocked. 20-30 min. at 340°C. Bake temperature can be reduced down to 330°C to avoid bubbling.
Long bake	An additional long bake of 90-180 minutes at 330°C given at the end does improve properties like smoothness, abrasion resistance, permeation resistance and intercoat adhesion.
Repair	Cut out the imperfection-touch up with a spray of powder-bake at 330°C.

\* Dry Film Thickness (DFT) measured with Dual probe ED10 or FD10 used in combination with the Dualscope MP20 or MP40 E-S

All recommendations are based upon best knowledge



#### Handling and Storage

- Powders must be stored at normal room temperature 18-27 °C (65-80 °F).
- Seal package to avoid excessive humidity or contamination.
- Powders should be usable for an indefinite period of time without caking or deteriorating if properly stored.

For medical application and development, consult Chemours.

### **Food Contact**

This product, when used in combination with another layer compliant with food legislations, is designed to be used in direct contact with food. Applied according to the application method and instructions on this fact sheet, the fully cured system will comply with US FDA food contact regulations. It can be sold and/or used for food contact applications for non stick coatings in Europe following the national legislations of each European country, having specific regulations for this category of coatings (non-stick, high temperature resistant). Presuming appropriate processing by the coater/applicator following the Good Manufacturing Practices Regulation (EC) n° 2023/2006/EC, the products can be used in the countries of the European Community for the manufacturing of non-stick coatings according to article 3 of Regulation (EC) No 1935/2004. Any changes or variations of individual coating thickness from what is indicated in this fact sheet should be assessed for food contact applications prior to its use. For details and information please contact your Chemours representative.

In Europe, in the case of incomplete compliance in one country, the product can, on the basis of its full compliance in at least one Member State of the European Union, be used for direct

food contact in all Member States according to the Article 34-36 of the Treaty on the Functioning of the European Union (TFEU).

Compositional statements, referring to relevant national legislation, are available on request.

#### **Disposal and Other Considerations**

Please follow the guidelines as outlined by SPI (The Society of the Plastics Industry) or APME (Association of Plastics Manufacturers Europe). For detailed information on health and safety, refer to the Safety Data Sheet.

For disposal, please follow these guidelines:

- All treatment, storage, transportation, and disposal of this product and/or container must be in accordance with applicable national and local regulations.
- Do not discharge aqueous dispersions to lakes, streams or waterways.
- Separate solids from liquid by precipitation and decanting or filtering. Dispose of dry solids in a landfill that is permitted, licensed or registered to manage industrial solid waste. Discharge liquid filtrate to a wastewater treatment system.
- Incinerate only if incinerator operates at 800°C or higher and is capable of scrubbing out hydrogen fluoride and other acidic combustion products.
- Industrial fluoropolymer waste containing additives such as solvents, primers or thinners must be regarded as special waste. Companies should contact their local waste disposal authorities for details of the relevant waste disposal regulations.
- Empty containers should preferably be cleaned and recycled. If this is not possible, the containers should be punctured or otherwise destroyed before disposal.

# For more information on Chemours Nonstick coatings: www.chemours.com or www.teflon.com

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