

Frechem®PVDF FR201 Injection grade—pellet

Characteristic

Physical properties	Unit	Specification	ASTM Test standard
Appearance	--	White and semi-transparent pellets	--
Density	g/cm ³	1.77~1.79	ASTM D792, @23/23°C
MFR	g/10min	12~26	ASTM D1238, 230°C/5kg
Rotation Viscosity	--	--	--
Intrinsic Viscosity	--	--	--
Water absorption	%	≤0.05	ASTM D570
Mechanical properties			
Tensile yield strength	Mpa	≥30	
Yield elongation	%	5-12	
Tensile strength	Mpa	≥30	ASTM D638
Elongation at break	%	50~250	50mm/min@23°C
Hardness	Shore D	70-80	
Thermal properties			
Melting point	°C	160-174	ASTM D3418,10°C/min
Crystallizing heat	°C	140	--
Brittleness temperature	°C	0-10	ASTM D746A
Molding shrinkage	%	2-3	
Electrical properties			
Surface resistivity	Ohm/square	≥1.10 ¹⁴	ASTM D257/Din 53483
Volume resistivity	Ohm.cm	≥1.10 ¹⁴	ASTM D257/Din 53483

Process safety instructions

- This product should be processed under 370°C, to avoid producing toxic gases;
- PVDF has good fire resistance and smoke inhibition property, however, when meets with fire, it will release toxic hydrogen fluoride gas and fluorocarbon compounds;
- Operators should take good care of personal protection during the use procedure and processing.

Packaging and storage

- 25 kg and 250 kg packages can be provided. PVDF is packed in double layer of polyethylene plastic bag and then put into a hard cardboard drum.
- It must be stored in clean, cool, dry place.

Frechem®PVDF FR202 Extrusion grade—pellet

Characteristic

Physical properties	Unit	Specification	
Appearance	--	White and semi-transparent pellets	--
Density	g/cm ³	1.75~1.77	ASTM D792, @23/23°C
MFR	g/10min	6~12	ASTM D1238, 230°C/5kg
Rotation Viscosity	--	--	--
Intrinsic Viscosity	--	--	--
Water absorption	%	≤0.05	ASTM D570
Mechanical properties			
Tensile yield strength	Mpa	≥30	
Yield elongation	%	5-12	ASTM D638
Tensile strength	Mpa	≥30	50mm/min@23°C
Elongation at break	%	50~250	
Hardness	Shore D	70-80	
Thermal properties			
Melting point	°C	160-174	ASTM D3418,10°C/min
Crystallizing heat	°C	140	--
Brittleness temperature	°C	0-10	ASTM D746A
Molding shrinkage	%	2-3	
Electrical properties			
Surface resistivity	Ohm/square	≥1.10 ¹⁴	ASTM D257/Din 53483
Volume resistivity	Ohm.cm	≥1.10 ¹⁴	ASTM D257/Din 53483

Process safety instructions

- This product should be processed under 370°C, to avoid producing toxic gases;
- PVDF has good fire resistance and smoke inhibition property, however, when meets with fire, it will release toxic hydrogen fluoride gas and fluorocarbon compounds;
- Operators should take good care of personal protection during the use procedure and processing.

Packaging and storage

- 25 kg and 250 kg packages can be provided. PVDF is packed in double layer of polyethylene plastic bag and then put into a hard cardboard drum. It must be stored in clean, cool, dry place.
- It must be stored in clean, cool, dry place.

Frechem®PVDF FR203 Molding grade—pellet

Characteristic

Physical properties	Unit	Specification	ASTM Test standard
Appearance	--	White and semi-transparent pellets	--
Density	g/cm ³	1.77~1.79	ASTM D792, @23/23°C
MFR	g/10min	1~5	ASTM D1238, 230°C/5kg
Rotation Viscosity	--	--	--
Intrinsic Viscosity	--	--	--
Water absorption	%	≤0.05	ASTM D570
Mechanical properties			
Tensile yield strength	Mpa	≥30	
Yield elongation	%	5-12	
Tensile strength	Mpa	≥30	ASTM D638
Elongation at break	%	50~250	50mm/min@23°C
Hardness	Shore D	70-80	
Thermal properties			
Melting point	°C	160-174	ASTM D3418,10°C/min
Crystallizing heat	°C	140	--
Brittleness temperature	°C	0-10	ASTM D746A
Molding shrinkage	%	2-3	
Electrical properties			
Surface resistivity	Ohm/square	≥1.10 ¹⁴	ASTM D257/Din 53483
Volume resistivity	Ohm.cm	≥1.10 ¹⁴	ASTM D257/Din 53483

Process safety instructions

- This product should be processed under 370 °C, to avoid producing toxic gases;
- PVDF has good fire resistance and smoke inhibition property, however, when meets with fire, it will release toxic hydrogen fluoride gas and fluorocarbon compounds;
- Operators should take good care of personal protection during the use procedure and processing.

Packaging and storage

- 25 kg and 250 kg packages can be provided. PVDF is packed in double layer of polyethylene plastic bag and then put into a hard cardboard drum.
- It must be stored in clean, cool, dry place.

Frechem®PVDF FR204 Coating grade —powder

Characteristic:

Physical properties	Unit	Specification	ASTM Test standard
Appearance	--	White powder	--
Density	g/cm ³	1.74~1.77	ASTM D792, @23/23°C
MFR	g/10min	0~2.0	ASTM D1238, 230°C/5kg
Purity	%	≥99.5	
Fineness		5.5	D1210, B
Water absorption	%	≤0.1	Karl Fisher
Mechanical properties			
Tensile yield strength	Mpa	--	
Yield elongation	%	--	
Tensile strength	Mpa	--	ASTM D638
Elongation at break	%	--	50mm/min@23°C
Hardness	Shore D	--	
Thermal properties			
Melting point	°C	156-165	ASTM D3418,10°C/min
Thermal decomposition temperature	°C	382-393	TGA, 1%Wt.Loss, Air
Crystallizing heat	°C	140	--
Brittleness temperature	°C	0-10	ASTM D746A
Molding shrinkage	%	2-3	
Electrical properties			
Surface resistivity	Ohm/square	≥1.10 ¹⁴	ASTM D257/Din 53483
Volume resistivity	Ohm.cm	≥1.10 ¹⁴	ASTM D257/Din 53483

Process safety instructions

- This product should be processed under 370°C, to avoid producing toxic gases;
- PVDF has good burning suppression performance and smoke suppression performance, however, when meets with fire, it will release toxic hydrogen fluoride gas and fluorocarbon compounds.
- Operators should take good care of personal protection during the use procedure and processing.

Packaging and storage

- 25 kg and 1000 kg packages can be provided. PVDF is packed in double layer of polyethylene plastic bag and then put into a hard cardboard drum.
- It must be stored in clean, cool, dry place.

Frechem®PVDF FR205 For Li-battery adhesive — powder

Characteristic:

Physical properties	Unit	Specification	ASTM Test standard
Appearance	--	White powder	--
Density	g/cm ³	1.74~1.77	ASTM D792, @23/23°C
Solubility	--	Solution clear and transparent, no impurities	30°C, 1hour 1g/10ml NMP
Rotation Viscosity	mpa.s	≥200	1g/10ml NMP, 30°C
Intrinsic Viscosity	dl/g	1.0-2.0	DMA, 30°C
Water absorption	%	≤0.10	Karl Fisher

Mechanical properties

Tensile yield strength	Mpa	--	
Yield elongation	%	--	
Tensile strength	Mpa	--	ASTM D638
Elongation at break	%	--	50mm/min@23°C
Hardness	Shore D	--	

Thermal properties

Melting point	°C	158-168	ASTM D3418,10°C/min
Crystallizing heat	°C	140	--
Brittleness temperature	°C	0-10	ASTM D746A
Molding shrinkage	%	2-3	

Electrical properties

Surface resistivity	Ohm/square	≥1.10 ¹⁴	ASTM D257/Din 53483
Volume resistivity	Ohm.cm	≥1.10 ¹⁴	ASTM D257/Din 53483

Process safety instructions

- This product should be processed under 370°C, to avoid producing toxic gases;
- PVDF has good burning suppression performance and smoke suppression performance, however, when meets with fire, it will release toxic hydrogen fluoride gas and fluorocarbon compounds;
- Operators should take good care of personal protection during the use procedure and processing.

Packaging and storage

- 25 kg and 250 kg packages can be provided. PVDF is packed in double layer of polyethylene plastic bag and then put into a hard cardboard drum.
- It must be stored in clean, cool, dry place.