

Clariant Nylon 6 PA-211X012

Polyamide 6
Clariant Corporation

Message:

Clariant Nylon 6 PA-211X012 is a polyamide 6 (nylon 6) material. This product is available in North America and is processed by extrusion or injection molding.

The main features of the Clariant Nylon 6 PA-211X012 are:

- flame retardant/rated flame
- Flame Retardant
- high strength
- Copolymer
- Good processability

Typical application areas include:

- Wire and cable
- military applications
- Hose
- Sporting goods
- medical/health care

General Information	
Features	Good dimensional stability
	Rigidity, high
	Rigid, good
	High strength
	Copolymer
	Impact resistance, good
	Workability, good
	Good corrosion resistance
	Good melt strength
	Good flexibility
	Good coloring
	Good wear resistance
	Good chemical resistance
	Good toughness
	Flame retardancy
Uses	Cable sheath
	Pipe fittings
	Metal substitution
	Military application
	Sporting goods
	Medical/nursing supplies
Agency Ratings	UL 94

Forms	Particle		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	1.3	%	ASTM D955
Water Absorption (24 hr)	1.2	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	40		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	45.5	MPa	ASTM D638
Tensile Elongation (Yield)	200	%	ASTM D638
Flexural Modulus	1170	MPa	ASTM D790
Flexural Strength	46.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	53	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	46.1	°C	ASTM D648
CLTE - Flow	1.2E-4	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	79.4	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.20	%	
Rear Temperature	249 - 274	°C	
Middle Temperature	249 - 274	°C	
Front Temperature	249 - 274	°C	
Processing (Melt) Temp	254 - 271	°C	
Melt Temperature (Aim)	266	°C	
Mold Temperature	65.6 - 93.3	°C	
Injection Rate	Fast		
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	20 - 100	rpm	
Cushion	3.18 - 6.35	mm	

Injection instructions
Injection Pressure: Use minimum pressure to achieve 95% fill during the boost inj. pressure phase.Hold Pressure: 30% to 75% of injection pressure.Mold Temp. Target: 180°FScrew Speed Target: 75 RPM

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