# NYCOA Polyamide 1637

## Polyamide 6

## Nycoa (Nylon Corporation of America)

#### Message:

NYCOA 1637 is a plasticized, heat stabilized extrusion material used by the wire and cable industry for protective jacketing.

NYCOA 1637 is available as a low or a high viscosity material in order to facilitate ease of processing over a range of line speeds. In addition NYCOA 1637 is available in a higher extractable version for improved flexibility in MCM size wire.

NYCOA 1637 is available with custom additive packages: UV stabilizer, flame retardant and/or custom colors.

NYCOA 1637 meets the rigorous requirements for a protective material and has been recognized by the Underwriters' Laboratories for jacketing of Type THHN and Type THWN thermoplastic-insulated wire.

Plasticzer     Features   Plasticzed Thermal Stability     Uses   Cable sheath Wire sheath     Forms   Particle     Processing Method   Extrusion     Physical   Nominal Value   Unit     Postoffic Gravity   1.13   g/cm³   ASTM D792     Rardness   Nominal Value   Unit   Test Method     Rockel Hardness (R-Scale)   105   Katt D570   ASTM D785     Restengt <sup>1</sup> 7.8   MPa   ASTM D683     Flexural Nodulus <sup>3</sup> 100   MPa   ASTM D683     Flexural Nodulus <sup>3</sup> 100   MPa   ASTM D693     Flexural Nodulus <sup>3</sup> 100   MPa   ASTM D693     Flexural Nodulus <sup>3</sup> 100   MPa   ASTM D693     Instact Colonge time file Colonge time	General Information			
Features   Plasticized Thermal Stability     Uses   Cable sheath Wire sheath     Forms   Particle     Processing Method   Extrusion     Physical   Nominal Value   Unit     Physical   Nominal Value   Morti Particle     Specific Gravity   1.13   g/cm <sup>3</sup> ASTM D792     Hardness   Nominal Value   Unit   Test Method     Rockwell Hardness (R-Scale)   10   Test Method   Test Method     Tensile Strength <sup>1</sup> 73.8   MPa   ASTM D792     Eleural Modulus <sup>3</sup> 100   %   ASTM D638     Flexural Strength <sup>1</sup> 73.8   MPa   ASTM D790     Instance <sup>1</sup> 9.3   MPa   ASTM D790     Internal Command Value   Unit   Test Method   Morti Matulus Method     Notched Izod Impact (6.35 mm)   9.3   MPa   ASTM D790     Internal Command Malue   Unit   Test Method <th>Additive</th> <th>heat stabilizer</th> <th></th> <th></th>	Additive	heat stabilizer		
Internal StabilityUsesSale sheath wire sheathFormsParticleProcessing MethodMaring CommonPhysicalNominal ValueMinal ValueMinal CommonSpecific Gravity1.3Vater Absorption (24 hr)2.5Mominal ValueMinal CommonRockwell Hardness (R-Scale)Nominal ValueMominal ValueUnitRockwell Hardness (R-Scale)05State Absorption (26 hrs)Nalinal CommonRockwell Hardness (R-Scale)Nominal ValueInsile Etongation <sup>2</sup> (Break)100Rockwell NatureNalinalTensile Etongation <sup>2</sup> (Break)100Insile Etongation <sup>2</sup> (Break)100		Plasticizer		
Internal StabilityUsesSale sheath wire sheathFormsParticleProcessing MethodMaring CommonPhysicalNominal ValueMinal ValueMinal CommonSpecific Gravity1.3Vater Absorption (24 hr)2.5Mominal ValueMinal CommonRockwell Hardness (R-Scale)Nominal ValueMominal ValueUnitRockwell Hardness (R-Scale)05State Absorption (26 hrs)Nalinal CommonRockwell Hardness (R-Scale)Nominal ValueInsile Etongation <sup>2</sup> (Break)100Rockwell NatureNalinalTensile Etongation <sup>2</sup> (Break)100Insile Etongation <sup>2</sup> (Break)100	Features	Plasticized		
UsesCable sheath wire sheathFormsParticleProcessing MethodExtrusionPhysicalNominal ValueDysolic Gravity1.13Specific Gravity1.13Water Absorption (24 hr)2.5Nominal ValueUnitBreckwell Hardness (R-Scale)Nominal ValueNominal ValueUnitRockwell Hardness (R-Scale)105Store Strength <sup>1</sup> 7.8Tensile Strength <sup>2</sup> 100Tensile Strength <sup>4</sup> 101Tensile Strength <sup>4</sup> 7.3InstanceASTM D503Instance Strength <sup>4</sup> 7.9.3Nominal ValueUnitInstance Strength <sup>4</sup> 7.9.3Tensile Strength <sup>4</sup> 7.9.3Notched Izod Impact (6.35 mm)5.1Instance Strength <sup>4</sup> 5.1Notched Izod Impact (6.45 mm)5.4Defection Temperature Under Load (1.8 MPA, Unannealed)S.4Additional Liftormation2.0Yan Defection Temperature Under Load (1.8 MPA, Unannealed)S.4Additional Liftormation5.4Strength Strength5.4Strength Strength StrengthS.5Method Temperature5.4Strength Strength StrengthS.5Strength Strength StrengthS.5Strength Strength Strength Strength StrengthS.5Strength Strength	reatures			
Wire sheathFormsParticleProcessing MethodExtrusionPhysicalNominal ValueUnitSpecific Gravity1.13GravitaVater Absorption (24 hr)2.5% 100Nominal ValueUnitTest MethodRockwell Hardness (R-Scale)105Katto Test MethodRockwell Hardness (R-Scale)105Statt DispaceTensie Strength <sup>1</sup> 7.3MPaASTM D53Tensie Strength <sup>2</sup> 100MPaASTM D53Flexural Modulus <sup>3</sup> 100MPaASTM D53Flexural Strength <sup>4</sup> 7.3MPaASTM D53Flexural Strength <sup>4</sup> 7.9MPaASTM D53Instance100MPaASTM D53Flexural Strength <sup>4</sup> 5.4UnitTest MethodNominal ValueUnitTest MethodParticeScanowScanowMethodScanowScanowNominal ValueUnitTest MethodNominal ValueUnitTest MethodNominal ValueUnitTest MethodNominal ValueScanowScanowNominal ValueScanowScanowNominal V		Thermal Stability		
Forms   Particle     Processing Method   Extrusion     Physical   Nominal Value   Unit   Test Method     Specific Gravity   1.13   g/cm³   ASTM D792     Water Absorption (24 hr)   2.5   %   ASTM D570     Hardness   Nominal Value   Unit   Test Method     Rockwell Hardness (R-Scale)   105   XTM D785     Mechanical   Nominal Value   Unit   Test Method     Tensile Strength <sup>1</sup> 73.8   MPa   ASTM D638     Tensile Elongation <sup>2</sup> (Break)   100   MPa   ASTM D790     Impact   Yong   ASTM D790   ASTM D790     Impact   Nominal Value   Unit   Test Method     Notherd Lzod Impact (6.35 mm)   51   J/m   ASTM D790     Impact   Nominal Value   Unit   Test Method     Deflection Temperature Under Load (1.8 MPa, Unanneeled)   S44   Tc   ASTM D648     Meling Temperature   220   "C   XTM D648   XTM D648	Uses	Cable sheath		
Processing MethodExtrusionPhysicalNominal ValueUnitTest MethodSpecific Gravity1.13g/cm³ASTM D792Water Absorption (24 hr)2.5%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)105ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength <sup>1</sup> 73.8MPaASTM D638Tensile Elongation <sup>2</sup> (Break)100%ASTM D638Flexural Modulus <sup>3</sup> 2100MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256Deflection Temperature Under Load (1.8 MPa, Unannealed)S4.4°CASTM D648Melting Temperature220°CXTM D648		Wire sheath		
Processing MethodExtrusionPhysicalNominal ValueUnitTest MethodSpecific Gravity1.13g/cm³ASTM D792Water Absorption (24 hr)2.5%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)105ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength <sup>1</sup> 73.8MPaASTM D638Tensile Elongation <sup>2</sup> (Break)100%ASTM D638Flexural Modulus <sup>3</sup> 2100MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256Deflection Temperature Under Load (1.8 MPa, Unannealed)S4.4°CASTM D648Melting Temperature220°CXTM D648	Forms	Particle		
PhysicalNominal ValueUnitTest MethodSpecific Gravity1.13g/cm³ASTM D792Water Absorption (24 hr)2.5%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)105ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256Deflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CXFM D648				
Water Absorption (24 hr)2.5%ASTM D570HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)105Test MethodTest MethodMechanicalNominal ValueUnitTest MethodTensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CMething Temperature220°CAdditional InformationStem D548	Physical	Nominal Value	Unit	Test Method
HardnessNominal ValueUnitTest MethodRockwell Hardness (R-Scale)105ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100% 0ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CASTM D648	Specific Gravity	1.13	g/cm³	ASTM D792
Rockwell Hardness (R-Scale)105ASTM D785MechanicalNominal ValueUnitTest MethodTensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256Deflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Mething Temperature220°CC	Water Absorption (24 hr)	2.5	%	ASTM D570
MechanicalNominal ValueUnitTest MethodTensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CC	Hardness	Nominal Value	Unit	Test Method
Tensile Strength 173.8MPaASTM D638Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CC	Rockwell Hardness (R-Scale)	105		ASTM D785
Tensile Elongation 2 (Break)100%ASTM D638Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CC	Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus 32100MPaASTM D790Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CC	Tensile Strength <sup>1</sup>	73.8	MPa	ASTM D638
Flexural Strength 479.3MPaASTM D790ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CSTM D648	Tensile Elongation <sup>2</sup> (Break)	100	%	ASTM D638
ImpactNominal ValueUnitTest MethodNotched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CCAdditional InformationFersonStandal Medical Medi	Flexural Modulus <sup>3</sup>	2100	MPa	ASTM D790
Notched Izod Impact (6.35 mm)51J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°C*CAdditional Information*********************************	Flexural Strength <sup>4</sup>	79.3	MPa	ASTM D790
ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)54.4°CASTM D648Melting Temperature220°C*CAdditional Information*********************************	Impact	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8     MPa, Unannealed)   54.4   °C   ASTM D648     Melting Temperature   220   °C     Additional Information	Notched Izod Impact (6.35 mm)	51	J/m	ASTM D256
MPa, Unannealed)54.4°CASTM D648Melting Temperature220°CAdditional Information	Thermal	Nominal Value	Unit	Test Method
Melting Temperature 220 °C   Additional Information	-	54.4	°C	ASTM D648
	Melting Temperature	220	°C	
The value listed as Melting Point was tested in accordance with ASTM D789.Tensile Elongation at Break, ASTM 638: 100+%	Additional Information			
	The value listed as Melting Point was tested	in accordance with ASTM D789	Tensile Elongation at Break, AST	TM 638: 100+%

1.	51 mm/min
2.	51 mm/min
3.	51 mm/min
4.	51 mm/min

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

