

DuPont Performance Polymers Minlon® 12TA BKB124 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Mineral Filled

Material Notes:

Minlon® 12TA BKB124 is a 32% mineral reinforced, toughened, heat stabilized, black polyamide 66 resin for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Minlon-12TA-BKB124-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.38 g/cc	1.38 g/cc	DAM; ASTM D792
Density	1.38 g/cc	0.0499 lb/in ³	DAM; ISO 1183
Filler Content	32 %	32 %	DAM
Linear Mold Shrinkage	0.010 cm/cm	0.010 in/in	Flow; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.010 cm/cm	0.010 in/in	Flow; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.010 cm/cm	0.010 in/in	Transverse; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.010 cm/cm	0.010 in/in	Transverse; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.015 cm/cm	0.015 in/in	Flow; DAM
	@Thickness 6.40 mm	@Thickness 0.252 in	
	0.015 cm/cm	0.015 in/in	Transverse; DAM
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	58.0 MPa	8410 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	78.0 MPa	11300 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	76.0 MPa	11000 psi	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Elongation at Break	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; ISO 527
	17 %	17 %	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	40 %	40 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	1.90 GPa	276 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.80 GPa	696 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	1.80 GPa	261 ksi	50%RH; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.40 GPa	638 ksi	DAM; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.41 GPa	640 ksi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	DAM; ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched	16.0 J/cm	30.0 ft-lb/in	DAM; ASTM D4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.00 kJ/m ²	2.86 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.00 kJ/m ²	2.86 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.00 kJ/m ²	2.86 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.00 kJ/m ²	3.33 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	12.0 kJ/m ²	5.71 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	50%RH; ISO 180/1A Comments
Izod Impact, Unnotched (ISO)	85.0 kJ/m ²	40.4 ft-lb/in ²	DAM; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	85.0 kJ/m ²	40.4 ft-lb/in ²	50%RH; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	110 kJ/m ²	52.3 ft-lb/in ²	DAM; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	330 kJ/m ²	157 ft-lb/in ²	50%RH; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.50 J/cm ²	35.7 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.00 J/cm ²	38.1 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	12.0 J/cm ²	57.1 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	33.0 J/cm ²	157 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.400 J/cm ²	1.90 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.400 J/cm ²	1.90 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cm ²	2.38 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm ²	3.33 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
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Melting Point Thermal Properties	257 °C Metric	495 °F English	10°C/min; DAM; ISO 11357-1/-3 Comments
	258 °C	496 °F	DAM; ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	215 °C	419 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	75.0 °C	167 °F	DAM; ASTM D648
	80.0 °C	176 °F	DAM; ISO 75-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	295 °C	563 °F	DAM; Optimum
	285 - 305 °C	545 - 581 °F	DAM
Mold Temperature	70.0 - 120 °C	158 - 248 °F	DAM
	100 °C	212 °F	DAM; optimum
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Additive	Impact Modifier	DAM
Appearance	Black Color	DAM
Drying Recommended	Yes, if moisture content of resin exceeds recommended level	DAM
Features	Impact Resistance, Good	DAM
	Warpage, Low	DAM
Filler	Mineral filler	DAM
Forms	Pellets	DAM
Generic	Nylon 66	DAM
Heat Stabilized	Yes	DAM
Material Status	Current	DAM
Part Marking Code	>PA66-IMD32<	ISO 11469; DAM
Polymer Family	Polyamide	DAM
Polymer Type		DAM

Descriptive Properties	PA66 Value	Comments
Processing Method	Injection Molding	DAM
Product Category	Low Warp Resins	DAM
	Mineral Reinforced Resins	DAM
	Toughened Resins	DAM
Resin Identification	PA66-IMD32	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Uses	Appliance Components	DAM
	Automotive Applications	DAM
	Tool, Power & Others	DAM

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