




Zytel® 8018HS NC010 (Dry)




DuPont Engineering Polymers - Polyamide 66

Unit System: English 

View

Datasheet	Shown Below
ASTM Data Sheet	
ISO Data Sheet	
CAMPUS® Data Sheet	

Actions

Product Sourcing	
E-mail a Datasheet	
Product Alternatives	

General Information

General	Test Method
Material Status	● Commercial: Active
Availability	● North America
Test Standards Available	● ASTM ● ISO ● ISO 10350
Filler/Reinforcement	● Glass fiber reinforcement, 14 % Filler by Weight
Additive	● Heat Stabilizer
Features	● Heat Stabilized ● Impact Resistance, High ● Toughness, Good
Uses	● Appliance Components ● Industrial Applications ● Automotive Applications ● Sporting Goods ● Fasteners
Appearance	● Colors Available ● Natural Color
Forms	● Pellets
Processing Method	● Injection Molding
Multi-Point Data	● Isothermal Stress vs. Strain (ISO 11403-1) ● Secant Modulus vs. Strain (ISO 11403-1)
Part Marking Code	● >PA66-IGF14< ISO 11469
Resin ID	● PA66-IGF14 ISO 1043

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.19	sp gr 23/23°C	ASTM D792
Density	1.19	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73 °F)	609000	psi	ISO 527-1, -2
Tensile Strength (73 °F)	13100	psi	ASTM D638
Tensile Stress at Break (73 °F)	12300	psi	ISO 527-1, -2
Tensile Elongation @ Brk (73 °F)	6.0	%	ASTM D638
Tensile Strain at Break (73 °F)	9.0	%	ISO 527-1, -2
Flexural Modulus (73 °F)	531000	psi	ASTM D790
Flexural Modulus (73 °F)	522000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ²			ISO 179
(-22 °F)	2.86	ft-lb/in ²	
(73 °F)	5.71	ft-lb/in ²	

Charpy Unnotched Impact Strength ³		ISO 179
(-22 °F)	38.1 ft-lb/in ²	
(73 °F)	38.1 ft-lb/in ²	
Notched Izod Impact (73 °F)	2.62 ft-lb/in	ASTM D256
Notched Izod Impact Strength ⁴		ISO 180
(-40 °F)	3.33 ft-lb/in ²	
(73 °F)	6.19 ft-lb/in ²	
Unnotched Izod Impact (73 °F)	18.0 ft-lb/in	ASTM D256
Unnotched Izod Impact Strength (73 °F) ⁵	42.8 ft-lb/in ²	ISO 180
Thermal	Nominal Value Unit	Test Method
DTUL @66psi - Unannealed	482 °F	ASTM D648
HDT B (0.45 MPa) Unannealed ⁶	475 °F	ISO 75B-1, -2
DTUL @264psi - Unannealed	428 °F	ASTM D648
HDT A (1.80 MPa) Unannealed ⁶	383 °F	ISO 75A-1, -2
Melting Temperature (DSC)	505 °F	ISO 3146
Melting Point	505 °F	DSC
CLTE, Flow (TMA) (73 to 130°F (23 to 55°C))	0.000028 in/in/°F	ASTM E831
Coefficient of Linear Thermal Expansion, Flow (23 to 55°C (73 to 130°F))	0.000066 in/in/°F	ISO 11359-1, -2
CLTE, Transverse (TMA) (73 to 130°F (23 to 55°C))	0.000066 in/in/°F	ASTM E831
Coefficient of Linear Thermal Expansion, Transverse (23 to 55°C (73 to 130°F))	0.000028 in/in/°F	ISO 11359-1, -2
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL		UL 94
(0.0295 in)	HB	
(0.0591 in)	HB	
(0.118 in)	HB	
UL 746	Nominal Value Unit	Test Method
Rel Temp Indx Mech w/Imp		UL 746
(0.0295 in)	185 °F	
(0.0591 in)	221 °F	
(0.118 in)	221 °F	
Rel Temp Indx Mech w/Imp		UL 746
(0.0295 in)	149 °F	
(0.0591 in)	203 °F	
(0.118 in)	221 °F	
Rel Temp Indx Elect		UL 746
(0.0295 in)	248 °F	
(0.0591 in)	248 °F	
(0.118 in)	248 °F	

Additional Properties

The value listed as Melting Temperature, ISO 3146, was tested in accordance with ISO 11357-1/-3.
The value listed as Unnotched Izod Impact, ASTM D256, was tested in accordance with ASTM D4812.
Flammability Classification, IEC 60695-11-10, 0.75mm: HB
Flammability Classification, IEC 60695-11-10, 1.5mm: HB
Flammability Classification, IEC 60695-11-10, 3.0mm: HB

CAMPUS® Properties ⁷

Mechanical properties 23°C/50%r.h.	Nominal Value Unit	Test Method
Tensile modulus	609000 psi	ISO 527-1, -2
Stress at break	12000 psi	ISO 527-1, -2
Strain at break	9.0 %	ISO 527-1, -2
Charpy impact strength (+23°C)	38.1 ft-lb/in ²	ISO 179/1eU
Charpy impact strength (-30°C)	38.1 ft-lb/in ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5.71 ft-lb/in ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	2.86 ft-lb/in ²	ISO 179/1eA
Thermal properties	Nominal Value Unit	Test Method
Melting temperature (10°C/min)	505 °F	ISO 11357-1, -3
Temp. of deflection under load (1.80 MPa)	383 °F	ISO 75-1, -2

Temp. of deflection under load (0.45 MPa)	475 °F	ISO 75-1, -2
Coeff.of linear therm. expansion (parallel)	0.000028 in/in/°F	ISO 11359-1, -2
Coeff.of linear therm. expansion (normal)	0.000066 in/in/°F	ISO 11359-1, -2
Other properties	Nominal Value Unit	Test Method
Density	0.0430 lb/in ³	ISO 1183

Processing Information

Injection	Nominal Value Unit
Suggested Max Moisture	0.20 %
Processing (Melt) Temp	545 to 581 °F
Mold Temperature	122 to 212 °F

Notes

Typical properties: these are not to be construed as specifications.

Type 1, Edgewise, Notch A

Type 1, Edgewise

Type 1, Notch A

Type 1

Flatwise

Typical properties: these are not to be construed as specifications. Additional CAMPUS® data and disclaimer information may be found on CAMPUS® Data Sheet.



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