## Akulon® K222-D

## Polyamide 6 DSM Engineering Plastics



## Technical Data

Product	Description
Low Vi	ecoeity

General			
Material Status	Commercial: Active		
Literature <sup>1</sup>	<ul><li>Processing (English)</li><li>Technical Datasheet (English)</li></ul>		
UL Yellow Card <sup>2</sup>	<ul><li>E43392-235086</li><li>E47960-240087</li></ul>		
Search for UL Yellow Card	<ul><li>DSM Engineering Plastics</li><li>Akulon®</li></ul>		
Availability	<ul><li>Africa &amp; Middle East</li><li>Asia Pacific</li></ul>	Europe     Latin America	North America
Features	<ul> <li>Low Viscosity</li> </ul>		
Processing Method	<ul> <li>Injection Molding</li> </ul>		
Multi-Point Data	<ul> <li>Creep Modulus vs. Time (ISO 11403-1)</li> <li>Isochronous Stress vs. Strain (ISO 11403-1)</li> <li>Isothermal Stress vs. Strain (ISO 11403-1)</li> </ul>	11403-1)	
Resin ID (ISO 1043)	• PA6	(100 11100 2)	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.13	_	g/cm³	ISO 1183
Water Absorption				ISO 62
Saturation, 73°F (23°C)	9.0	_	%	
Equilibrium, 73°F (23°C), 50% RH	2.5		%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	464000 (3200)	145000 (1000)	psi (MPa)	ISO 527-2
Tensile Stress (Yield)	12300 (85.0)	6530 (45.0)	psi (MPa)	ISO 527-2
Tensile Strain (Yield)	4.0	25	%	ISO 527-2
Nominal Tensile Strain at Break	20	> 50	%	ISO 527-2
Flexural Modulus	377000 (2600)	-	psi (MPa)	ISO 178
Flexural Stress	14500 (100)		psi (MPa)	ISO 178
mpact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	9-2-30-20-57		J-1-39-37-	ISO 179/1eA
-22°F (-30°C)	2.4 (5.0)	2.4 (5.0)	ft·lb/in² (kJ/m²)	
73°F (23°C)	3.8 (8.0)	17 (35)	ft·lb/in² (kJ/m²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	No Break	No Break		

1 of 3

Form No. TDS-4611-en

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73°F (23°C)

No Break

No Break



Heat Deflection Temperature	Thermal	Dry	Conditioned	Unit	Test Method
Solution   Solution	Heat Deflection Temperature			Onic	rest weared
264 psi (1.8 MPa), Unannealed         140 (60.0)         -         °F (°C)         ISO 75-2/A           Melting Temperature 4         428 (220)         -         °F (°C)         ISO 11357-3           CLTE         ISO 11359-2         ISO 11359-2         ISO 11359-2           Flow         5.0E-5 (9.0E-5)         -         in/In/In/F (cm/cm/c°C)         ISO 11359-2           Transverse         5.0E-5 (9.0E-5)         -         in/In/In/F (cm/cm/c°C)         ISO 11359-2           Electrical         Dry         Conditioned         Unit         Test Method           Surface Resistivity         -         1.0E+14         ohms         IEC 60093           Volume Resistivity         1.0E+15         1.0E+12         ohms-cm         IEC 60093           Electric Strength         640 (25)         (20)         V/mill (kV/mm)         IEC 60250           100 Hz         3.20         14.0         IEC 60250           1 MHz         3.00         4.50         IEC 60250           Dissipation Factor         IEC 60250         IEC 60250           1 MHz         0.015         0.12         IEC 60112           Comparative Tracking Index         -         600         V         IEC 60095-11-10           Flammability	66 psi (0.45 MPa), Unannealed	(150)			ISO 75-2/B
CLTE	264 psi (1.8 MPa), Unannealed	(60.0)	-	°F	ISO 75-2/A
Flow 5.0E-5 (9.0E-5) — in/ln/°F (cm/cm/°C) (5.0E-5 (5.0E-5 (9.0E-5) — in/ln/°F (cm/cm/°C) (5.0E-5 (5.0E-5 (9.0E-5) — in/ln/°F (cm/cm/°C) (5.0E-5 (5.0E-5 (5.0E-5) — in/ln/°F (cm/cm/°C) (5.0E-5 (5.0E-5) — in/ln/°F (cm/cm/cm/°C) (5.0E-5 (5.0E-5) — in/ln/°F (cm/cm/cm/°C) (5.0E-5 (5.0E-5) — in/ln/°F (cm/cm/cm/cm/cm/cm/cm/cm/cm/cm/cm/cm/cm/c			-		ISO 11357-3
Proceedings	CLTE				ISO 11359-2
Selectrical   Dry   Conditioned   Unit   Test Method	Flow	(9.0E-5)			
Surface Resistivity - 1.0E+14		5.0E-5 (9.0E-5)	_		
Volume Resistivity         1.0E+15         1.0E+12         ohms-cm         IEC 60093           Electric Strength         640 (25)         510 (20)         V/mil (kV/mm)         IEC 60243-1           Relative Permittivity         IEC 60250         IEC 60250           100 Hz         3.20         14.0         IEC 60250           1 MHz         3.00         4.50         IEC 60250           100 Hz         5.0E-3         0.30         IEC 60250           1 MHz         0.015         0.12         IEC 60112           Comparative Tracking Index         —         600         V         IEC 60112           Iammability         Dry         Conditioned         Unit         Test Method           Flammability Classification         IEC 60695-11-10         -20         -20           0.12 in (3.0 mm)         V-2         —         -	Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (25) (20) (Winil (kV/mm)   IEC 60243-1   Relative Permittivity   IEC 60250   100 Hz   3.20   14.0   1 MHz   3.00   4.50   Dissipation Factor   IEC 60250   100 Hz   5.0E-3   0.30   1 MHz   0.015   0.12    Comparative Tracking Index   600   V   IEC 60112   Immability   Dry   Conditioned   Unit   Test Method   Flammability Classification   0.06 in (1.5 mm)   V-2     0.12 in (3.0 mm)   V-2	Surface Resistivity	-	1.0E+14	ohms	IEC 60093
Comparative Tracking Index   Comparative Tr	Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
100 Hz 3.20 14.0  1 MHz 3.00 4.50  Dissipation Factor IEC 60250  100 Hz 5.0E-3 0.30  1 MHz 0.015 0.12  Comparative Tracking Index - 600 V IEC 60112  lammability Dry Conditioned Unit Test Method Flammability Classification 0.06 in (1.5 mm) V-2  0.12 in (3.0 mm) V-2					IEC 60243-1
1 MHz 3.00 4.50  Dissipation Factor IEC 60250 100 Hz 5.0E-3 0.30  1 MHz 0.015 0.12  Comparative Tracking Index - 600 V IEC 60112  lammability Dry Conditioned Unit Test Method Flammability Classification 0.06 in (1.5 mm) V-2 - 0.12 in (3.0 mm)  V-2	Relative Permittivity				IEC 60250
Dissipation Factor  100 Hz  5.0E-3  0.30  1 MHz  0.015  0.12  Comparative Tracking Index	100 Hz	3.20	14.0		
100 Hz 5.0E-3 0.30  1 MHz 0.015 0.12  Comparative Tracking Index - 600 V IEC 60112  lammability Dry Conditioned Unit Test Method Flammability Classification 0.06 in (1.5 mm) V-2  0.12 in (3.0 mm) V-2	1 MHz	3.00	4.50		
1 MHz 0.015 0.12  Comparative Tracking Index 600 V IEC 60112  Iammability Dry Conditioned Unit Test Method Flammability Classification 0.06 in (1.5 mm) V-2  0.12 in (3.0 mm) V-2	Dissipation Factor				IEC 60250
Comparative Tracking Index	100 Hz	5.0E-3	0.30		
Image: Packing index	1 MHz	0.015	0.12		
Flammability Classification 0.06 in (1.5 mm)  0.12 in (3.0 mm)  U-2	Comparative Tracking Index		600	٧	IEC 60112
0.06 in (1.5 mm) V-2	lammability	Dry	Conditioned	Unit	Test Method
0.06 in (1.5 mm) V-2  0.12 in (3.0 mm) V-2	Flammability Classification				IEC 60695-11-10
0/	0.06 in (1.5 mm)	V-2			-20
Oxygen Index 26 % ISO 4589-2	0.12 in (3.0 mm)	V-2			
	Oxygen Index	26	-	%	ISO 4589-2



Form No. TDS-4611-en

<sup>&</sup>lt;sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>&</sup>lt;sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

<sup>3</sup> Typical properties: these are not to be construed as specifications.

<sup>4 10°</sup>C/min