

Ultramid® A3SK

Polyamide 66

BASF Corporation

Message:

Very easy flowing injection moulding grade for rapid production of thin-walled technical parts (eg housings and small components)

General Information				
UL YellowCard		E36632-531627	E41871-233739	
Features		Fast Molding Cycle		
		Good Flow		
		Oil Resistant		
Uses		Engineering Parts		
		Housings		
		Thin-walled Parts		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	135	--	cm³/10min	ISO 1133
Water Absorption				ISO 62
Saturation, 23°C	8.0 to 9.0	--	%	
Equilibrium, 23°C, 50% RH	2.5 to 3.1	--	%	
Viscosity Number (H2SO4 (Sulphuric Acid))	150	--	cm³/g	ISO 307
Mold Shrinkage - constrained ¹	0.65	--	%	
Maximum Service Temperature - short cycle operation	200	--	°C	
Temperature Index - at 50% loss of tensile strength				IEC 60216
-- ²	99	--	°C	
-- ³	118	--	°C	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	3500	1600	MPa	ISO 527-2

Tensile Stress (Yield)	95.0	60.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	4.3	20	%	ISO 527-2/50
Nominal Tensile Strain at Break	15	> 50	%	ISO 527-2/50
Flexural Modulus	3200	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Notched Izod Impact Strength				ISO 180/1A
-30°C	4.0	--	kJ/m ²	
23°C	4.0	30	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	220	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	75.0	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	7.0E-5 to 1.0E-4	--	cm/cm/°C	ISO 11359-2
Specific Heat	1700	--	J/kg/°C	
Thermal Conductivity	0.33	--	W/m/K	DIN 52612
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	3.20	5.00		IEC 60250
Dissipation Factor (1 MHz)	0.025	0.20		IEC 60250
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.60 mm)	V-2	--		UL 94
Injection	Dry	Unit		
Processing (Melt) Temp	280 to 300		°C	
Mold Temperature	40.0 to 80.0		°C	
NOTE				

1. Test box with central gating, dimensions of base (107*47*1,5) mm, processing conditions: TM = 290°C, TW = 60°C
2. 20000 h
3. 5000 h

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