

Technical Data

Product Description

SAXAMID™ 236Q33 SAXAMID 236Q33 is a impact-modified polyamide 6.6 injection-molding-grade with very good flow properties and outstanding toughness. Even at low temperatures this grade offers super-tough properties.

Generic Nylon 66 This data represents typical values that have been calculated from all products classified as: Generic Nylon 66

This information is provided for comparative purposes only.

General

**SAXAMID™
236Q33**

**Generic
Nylon 66**

Manufacturer / Supplier

- SAX Polymers

- Generic

Generic Symbol

- Nylon 66

- Nylon 66

Material Status

- Commercial: Active

- Commercial: Active

Literature ¹

- [Technical Datasheet \(English\)](#)
- [Technical Datasheet \(German\)](#)

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Search for UL Yellow Card

- [SAX Polymers](#)
- [SAXAMID™](#)

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Availability

- Europe

- Africa & Middle East
- Asia Pacific
- Europe
- Latin America
- North America

Additive

- Impact Modifier

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Features

- Good Flow
- High Toughness
- Impact Modified
- Low Temperature Toughness

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Processing Method

- Injection Molding

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Also Available In

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- Asia Pacific
- Europe
- Latin America
- North America

Physical

**SAXAMID™
236Q33**

**Generic
Nylon 66**

Unit

Test Method

Density / Specific Gravity

--

--

1.07 to 1.18

g/cm³

ASTM D792

--

1.10

1.08 to 1.14

g/cm³

ISO 1183

--

--

1110

kg/m³

ISO 1183 ³

--

--

1.13 to 1.15

g/cm³

ASTM D1505

Apparent (Bulk) Density

--

0.70

g/cm³

ISO 60

Melt Mass-Flow Rate (MFR)

270°C/5.0 kg

--

4.8 to 84

g/10 min

ASTM D1238

275°C/0.325 kg

--

1.0 to 4.7

g/10 min

ISO 1133

Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)

--

1.0 to 140

cm³/10min

ISO 1133

Molding Shrinkage

Flow

--

0.19 to 2.1

%

ASTM D955

Across Flow

--

1.3 to 2.5

%

ASTM D955

--

--

0.96 to 2.0

%

ISO 294-4



Physical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Water Absorption				
24 hr	--	0.57 to 1.3	%	ASTM D570
24 hr, 23°C	--	0.64 to 1.5	%	ISO 62
Saturation	--	1.9 to 8.5	%	ASTM D570
Saturation, 23°C	--	6.9 to 9.0	%	ISO 62
Equilibrium	--	0.10 to 3.0	%	ASTM D570
Equilibrium, 23°C, 50% RH	--	1.2 to 3.0	%	ISO 62
Viscosity Number (Reduced Viscosity)	--	144.0 to 150.0	ml/g	ISO 1628
Viscosity Number				ISO 307
--	--	137 to 155	cm³/g	
H2SO4 (Sulphuric Acid)	150	--	cm³/g	
Relative Viscosity	--	2.33 to 56.0		
Mechanical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Tensile Modulus				
--	--	45.0 to 4730	MPa	ASTM D638
--	--	1350 to 4050	MPa	ISO 527-1
--	1500	--	MPa	ISO 527-1/1
--	--	2650	MPa	ISO 527-2 ³
Tensile Strength				
Yield	--	43.5 to 93.4	MPa	ASTM D638
Yield	--	49.5 to 91.8	MPa	ISO 527-2
Break	--	34.5 to 90.5	MPa	ASTM D638
Break	--	43.5 to 90.5	MPa	ISO 527-2
--	--	34.5 to 129	MPa	ASTM D638
--	40.0	--	MPa	ISO 527-2/50
--	--	43.8 to 92.4	MPa	ISO 527-2
Tensile Elongation				
Yield	--	1.0 to 12	%	ASTM D638
Yield	--	3.9 to 5.1	%	ISO 527-2
Break	--	0.40 to 67	%	ASTM D638
Break	--	0.50 to 50	%	ISO 527-2
Break	10	--	%	ISO 527-2/50
Nominal Tensile Strain at Break	--	9.7 to 51	%	ISO 527-2
Flexural Modulus				
--	--	3.03 to 4760	MPa	ASTM D790
--	--	1390 to 3240	MPa	ISO 178
-- ⁴	1600	--	MPa	ISO 178
Flexural Strength				
--	--	49.9 to 140	MPa	ASTM D790
--	--	11.0 to 170	MPa	ISO 178
-- ⁴	64.0	--	MPa	ISO 178
Yield	--	63.5 to 126	MPa	ASTM D790
Break	--	89.3 to 131	MPa	ASTM D790



Mechanical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Compressive Strength				
--	--	8.27 to 193	MPa	ASTM D695
--	--	31.8 to 100	MPa	ISO 604
Shear Strength	--	68.9 to 80.0	MPa	ASTM D732
Poisson's Ratio	--	0.37 to 0.40		ASTM E132
Coefficient of Friction	--	0.084 to 0.60		ASTM D1894
Wear Factor	--	-2.0 to 180	10 ⁻⁸ mm ³ /N·m	ASTM D3702
Films	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Tensile Elongation (Yield)	--	4.4 to 4.5	%	ISO 527-3
Impact	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Charpy Notched Impact Strength				
--	--	0.55 to 10	kJ/m ²	ISO 179
-40°C	21	--	kJ/m ²	ISO 179/1eA
23°C	90	--	kJ/m ²	ISO 179/1eA
23°C	--	4.03	kJ/m ²	ISO 179/1eA ³
Charpy Unnotched Impact Strength				
--	--	-1.0 to 110	kJ/m ²	ISO 179
-40°C	No Break	--		ISO 179/1eU
23°C	No Break	--		ISO 179/1eU
Notched Izod Impact				
--	--	5.5 to 93	J/m	ASTM D256
--	--	3.7 to 6.1	kJ/m ²	ISO 180
-40°C	23	--	kJ/m ²	ISO 180/1A
23°C	90	--	kJ/m ²	ISO 180/1A
Notched Izod Impact (Area)	--	3.00 to 5.18	kJ/m ²	ASTM D256
Unnotched Izod Impact				
--	--	54 to 1600	J/m	ASTM D4812
--	--	3.0 to 300	kJ/m ²	ISO 180
-40°C	No Break	--		ISO 180/1U
23°C	No Break	--		ISO 180/1U
Instrumented Dart Impact				
--	--	1.00 to 76.0	J	ASTM D3763
--	--	1.00 to 77.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force	--	2400 to 6150	N	ISO 6603-2
Hardness	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Rockwell Hardness				
--	--	84 to 122		ASTM D785
--	--	110 to 122		ISO 2039-2
Durometer Hardness				
--	--	72 to 85		ASTM D2240
--	--	79 to 94		ISO 868
Ball Indentation Hardness	--	90.5 to 182	MPa	ISO 2039-1



Thermal	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	--	184 to 263	°C	ASTM D648
0.45 MPa, Unannealed	--	179 to 233	°C	ISO 75-2/B
0.45 MPa, Annealed	--	184 to 250	°C	ISO 75-2/B
1.8 MPa, Unannealed	--	58.1 to 93.8	°C	ASTM D648
1.8 MPa, Unannealed	--	59.8 to 86.2	°C	ISO 75-2/A
1.8 MPa, Unannealed, 60.0 mm Span ⁵	65.0	--	°C	ISO 75-2/A
1.8 MPa, Annealed	--	63.1 to 72.2	°C	ISO 75-2/A
1.8 MPa	--	67.5	°C	ISO 75-2 ³
8.0 MPa, Unannealed	--	49.7 to 60.1	°C	ISO 75-2/C
Continuous Use Temperature	--	84.4 to 131	°C	ASTM D794
Glass Transition Temperature	--	5.00 to 80.0	°C	ISO 11357-2
Vicat Softening Temperature				
--	--	210 to 260	°C	ASTM D1525
--	180	--	°C	ISO 306/B120
--	--	200 to 251	°C	ISO 306
Melting Temperature				
--	--	253 to 263	°C	
--	--	260 to 265	°C	DSC
--	--	259 to 265	°C	ISO 11357-3
--	--	253 to 260	°C	ASTM D3418
--	--	260	°C	ISO 3146
Peak Crystallization Temperature (DSC)	--	214 to 221	°C	ASTM D3418
CLTE				
Flow	--	2.4E-5 to 8.4E-5	cm/cm/°C	ASTM D696
Flow	--	6.5E-5 to 1.2E-4	cm/cm/°C	ASTM E831
Flow	--	3.0E-6 to 3.1E-4	cm/cm/°C	ISO 11359-2
Transverse	--	9.1E-5 to 1.1E-4	cm/cm/°C	ASTM E831
Transverse	--	6.0E-5 to 4.1E-4	cm/cm/°C	ISO 11359-2
Specific Heat	--	1650 to 2100	J/kg/°C	ASTM C351
Thermal Conductivity				
--	--	0.20 to 1.8	W/m/K	ASTM C177
--	--	0.20 to 0.70	W/m/K	ISO 8302
RTI Elec	--	65.0 to 131	°C	UL 746B
RTI Imp	--	65.0 to 106	°C	UL 746B
RTI Str	--	65.0 to 131	°C	UL 746B
Electrical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Surface Resistivity				
--	--	55 to 2.5E+15	ohms	ASTM D257
--	--	1.0E+3 to 2.5E+16	ohms	IEC 60093
--	--	1.0E+12 to 1.0E+15	ohms	IEC 62631-3-2



Electrical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Volume Resistivity				
--	--	5.0 to 2.5E+16	ohms-cm	ASTM D257
--	--	1.0 to 2.5E+17	ohms-cm	IEC 60093
--	--	1.0E+10 to 2.5E+14	ohms-m	IEC 62631-3-1
Dielectric Strength				
--	--	15 to 23	kV/mm	ASTM D149
--	--	16 to 32	kV/mm	IEC 60243-1
Dielectric Constant				
--	--	2.88 to 4.06		ASTM D150
--	--	2.86 to 3.85		IEC 60250
--	--	3.44		IEC 60250
--	--	3.41		IEC 62631-2-1
Dissipation Factor				
--	--	0.010 to 0.030		ASTM D150
--	--	3.0E-3 to 0.033		IEC 60250
--	--	5.0E-3 to 0.023		IEC 62631-2-1
Arc Resistance	--	60.0 to 190	sec	ASTM D495
Comparative Tracking Index (CTI)	--	588 to 600	V	UL 746A
Comparative Tracking Index	--	597 to 608	V	IEC 60112
High Amp Arc Ignition (HAI)	--	87.6 to 200		UL 746A
Hot-wire Ignition (HWI)	--	8.0 to 46	sec	UL 746A
Flammability	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Burning Rate	--	99 to 100	mm/min	ISO 3795
Glow Wire Flammability Index	--	645 to 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	--	697 to 960	°C	IEC 60695-2-13
Oxygen Index				
--	--	21 to 33	%	ASTM D2863
--	--	26 to 28	%	ISO 4589-2
Optical	SAXAMID™ 236Q33	Generic Nylon 66	Unit	Test Method
Yellowness Index	--	-8.1 to 4.4	YI	ASTM D1925
Fill Analysis	SAXAMID™ 236Q33	Generic Nylon 66	Unit	
Melt Density	--	0.967 to 1.01	g/cm ³	
Ejection Temperature	--	190	°C	
Injection	SAXAMID™ 236Q33	Generic Nylon 66	Unit	
Drying Temperature	80	79 to 81	°C	
Drying Time	2.0 to 6.0	2.8 to 5.3	hr	
Drying Time, Maximum	--	8.0	hr	
Dew Point	--	-30 to -18	°C	
Suggested Max Moisture	< 0.20	0.095 to 0.24	%	
Suggested Shot Size	--	50	%	
Hopper Temperature	--	70 to 80	°C	



Injection	SAXAMID™ 236Q33	Generic Nylon 66	Unit
Rear Temperature	--	263 to 280	°C
Middle Temperature	--	263 to 297	°C
Front Temperature	--	265 to 302	°C
Nozzle Temperature	--	272 to 296	°C
Processing (Melt) Temp	270 to 300	268 to 296	°C
Mold Temperature	70 to 90	60 to 87	°C
Injection Pressure	--	68.8 to 99.4	MPa
Holding Pressure	--	74.3 to 75.0	MPa
Back Pressure	--	0.138 to 2.63	MPa
Screw Speed	--	44 to 400	rpm
Cushion	--	4.74 to 5.00	mm
Vent Depth	--	0.019 to 0.024	mm

Injection Notes

Generic Nylon 66
 This data represents typical values that have been calculated from all products classified as: Generic Nylon 66
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Extrusion	SAXAMID™ 236Q33	Generic Nylon 66	Unit
Drying Temperature	--	80	°C
Drying Time	--	3.0 to 5.0	hr
Suggested Max Moisture	--	0.050 to 0.20	%
Cylinder Zone 1 Temp.	--	272 to 273	°C
Cylinder Zone 2 Temp.	--	273	°C
Cylinder Zone 3 Temp.	--	273	°C
Cylinder Zone 5 Temp.	--	273	°C
Melt Temperature	--	282 to 283	°C
Die Temperature	--	278 to 284	°C

Extrusion Notes

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Notes

- ¹ 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.
- ² Typical properties: these are not to be construed as specifications.
- ³ Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
- ⁴ 2.0 mm/min
- ⁵ 80*10*4

