

## Product Information

# Ultramid® C Nylon Film Grades (PA6/66)

### Product description

Ultramid® C nylon film grades are medium and high viscosity copolyamide 6/66 materials specially developed for film applications. Their lower melting point and reduced crystallization make them especially well-suited for the production of transparent nylon layers in multilayer films

### Supply form and storage

Ultramid® C nylon film grades are supplied pre-dried and ready for processing in moisture resistant containers.

### Food legislation

Ultramid® film grades (Ultramid® A, B, C, Flex F) comply with the current legislation on plastics in contact with food in several regions. If you would like details on the food approval status of a particular Ultramid® grade, please visit us at our website ([nylon.basf.us](https://nylon.basf.us)) or contact your BASF representative directly or through this [link](#).

### Disclaimer

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## Properties of pellets

Property Description	Test Method	Unit	Ultrad® C nylon film grades			
			C33	C33L	C33LN	C40L
Viscosity Number (0.5% in 96% H <sub>2</sub> SO <sub>4</sub> )	ISO 307	—	195	195	195	270
Relative Viscosity (0.5% in 96% H <sub>2</sub> SO <sub>4</sub> )	ISO 307	—	3.3	3.3	3.3	4.0
Melting point (DSC)	ISO 3146 ASTM D3418	°C	195	195	195	190
		°F	385	385	385	375
Recrystallization Temperature (DSC)	ISO 3146 ASTM D3418	°C	149	149	149	130
		°F	300	300	300	266
Density	ISO 1183 ASTM D792	g/cm <sup>3</sup>	1.12	1.12	1.12	1.12
Moisture content as shipped	ISO 15512	%	0.06	0.06	0.06	0.06
Bulk density	—	kg/m <sup>3</sup>	780	780	780	780
Pellet shape	—	—	round	round	round	round
Pellet size	—	mm	2 - 2.5	2 - 2.5	2 - 2.5	2 - 2.5
Water absorption, 23°C/50% rh	—	%	3.2	3.2	3.2	3.2
Lubricant	—	—	—	✓	✓	✓
Nucleating agent	—	—	—	—	✓	—

## Typical Properties of 1 mil (25 um) Blown Film

Property Description	Test Method	Unit	Ultrad® C nylon film grades			
			C33	C33L	C33LN	C40L
Tensile strength	ISO 527	psi	13800	13800	13800	19950
			14490	14490	14490	18419
Elongation at break	ISO 527	%	460	460	460	470
			480	480	460	480
Puncture resistance, 2in/min 0.8mm needle probe	BASF	N	8	8	8	10
Elmendorf Tear	ASTM D1922	mN	1100	1100	1100	1100
			1300	1300	900	1400
Haze values	ASTM D1003	%	1.0	1.0	2.0	0.6
O <sub>2</sub> Transmission (OTR)	ASTM D3985-05	(cm <sup>3</sup> *25µm)/ (m <sup>2</sup> *day)	50	50	50	52
			35	35	35	45
			100	100	100	135
			170	170	170	200

Values shown are based on limited testing of unmodified, uncolored material at 23C and 50%RH (unless otherwise noted) and are not intended to be used in establishing maximum or minimum ranges for specification purposes. Please note that film properties depend heavily on type of processing, process conditions, film construction, thickness variation, and environmental conditions.

**Drying**

Ultramid® C nylons, like all polyamides, absorb moisture. Excess moisture is the leading cause of processing problems. Ultramid® C nylons are pre-dried before packing in sealed containers; however, once these seals are broken, care should be taken that the material be dried before processing. Generally, Ultramid® C nylons can be dried in a desiccant dryer with a dew point of -20F to -40F at 180°F for 2 hours or longer, depending on actual moisture conditions.

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**Processing**

Ultramid® C nylons may be processed on standard extrusion equipment. Extruder screws of L:D 24-30 and compression ratio 3.0-3.5 are recommended. Typical extruder settings are: zone 1 (feeding zone): 440-500°C, zone 2-4: 460-500°C, adapter: 460-500°C, die: 460-500°C

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**Further information**

<https://nylon-polyamides.basf.us/>

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**Contact us**

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