# Ultramid® for Extrusion – the reliable solution for demanding packaging and technical applications

## Contact: Extrusion Infopoint

Phone: +49 621 60-4 28 88 extrusion.ultramid@basf.com



Ultramid® extrusion grades are an excellent choice for flexible packaging and monofilaments. They exhibit a high transparency in the application and feature outstanding mechanical properties in strength and puncture resistance, as well as heat resistance.

In films, Ultramid has shown to be indispensable when it comes to

- Thermoformability
- Barrier (particularly oxygen, flavor, aroma, and chemicals)
- Downgauging potential due to unique combination of mechanical, thermal and optical properties
- High suitability for casings

Ultramid Extrusion grades are processable while using blown and cast film processes for oriented and non-oriented mono- and multilayer structures.

#### Recyclability

The German "Stiftung Zentrale Stelle Verpackungsregister" (Central Agency Packaging Register) has reclassified the recyclability of polyamides in the minimum standard for assessing the recyclability of packaging subject to system participation pursuant to Section 21 (3) VerpackG: Since September 1 2022, coextruded polyethylene (PE)/polyamide (PA) film structures have been recognized as mechanically recyclable.

As early as June 2021, the independent testing and certification facility cyclos-HTP systematically examined and confirmed the recyclability of PE/PA multilayer films on behalf of BASF.

#### **Alternative feedstocks**

Alternative feedstocks contribute to closing loops and support reduction of product carbon footprint: Besides fossil-based feedstock, Ultramid® is also available based on plastic waste (Ultramid® Ccycled™) or derived from biomass (Ultramid® Biomass Balance).

Many Ultramid grades are available as Biomass Balance and Ccycled versions as well, certified according to REDcert2 and/or ISCC+.



### **Ultramid® for Extrusion Product Range**

Ultramid <sup>®</sup>	melting point	viscosity number	relative viscosity	additives	applications
Ultramid® B (homopo	yamide PA6) grade:	S			
Ultramid® B33 L	220°C	195	3.3	lubricant	BOPA, paper coating monofilaments
Ultramid® B36 L	220°C	218	3.6	lubricant	blown film, casing, water cooled film
Ultramid® B36 LN	220°C	218	3.6	lubricant, nucleating agent	cast film
Ultramid® B36 LNV	220°C	218	3.6	lubricant, nucleating agent	cast film
Ultramid® B40	220°C	250	4.0		blown film, monofilaments
Ultramid® B40 L	220°C	250	4.0	lubricant	blown film, casing, monofilaments
Ultramid® B40 LN	220°C	250	4.0	lubricant, nucleating agent	cast film (blown film)
Ultramid® slow crysta	llisation grades				
Ultramid® B36 SL	215°C	218	3.6	lubricant	
Ultramid® B36 SLN	215°C	218	3.6	lubricant, nucleating agent	cast film, blown film, extrusion lamination
Ultramid® C (copolyar	nide PA6/66) grade	S			
Ultramid® C33	196°C	195	3.3		blown film, monofilaments
Ultramid® C33 L	196°C	195	3.3	lubricant	blown film
Ultramid® C33 LN	196°C	195	3.3	lubricant, nucleating agent	blown film
Ultramid® C37 LC	182°C	225	3.7	lubricant	monofilaments, blown film, shrink film
Ultramid® C37 LXC	182°C	225	3.7	lubricant	monofilaments
Ultramid® C40 L	189°C	225	4.0	lubricant	monofilaments, blown film, shrink film
Ultramid® C40 LN	189°C	225	4.0	lubricant, nucleating agent	blown film
Ultramid® C40 LX	189°C	225	4.0	lubricant	monofilaments
Ultramid® Flex F grad	es				
Ultramid® Flex F38	199°C		3.8*		special blown film

Nomenclature	Ultramid extrusion grades are designated by letters and digits which indicate chemical composition, viscosity and additives.			
Polyamide type	B = PA 6 C = copolyamide 6/66 F = copolyamide			
Viscosity class	Relative viscosity in 96%/23°C sulphuric acid (i.e 36 for RV 3.6)  * Except Ultramid Flex F38, measured in different solvent. 33 = intermediate viscosity 36 = intermediate to high viscosity 37 = high viscosity	6). 38 = high viscosity 40 = high viscosity		
Additive	L = lubricated LC = clear LN = lubricated and nucleated	LNV = lubricated and nucleated, reduced residual caprolactan level $LX = \text{high gloss and transparency} \\ S = \text{slow crystallisation}$		