



Transparency meets flexibility!

Ultramid® F Balance –
the transparent and flexible PA

 **BASF**

We create chemistry

Set a clear sign

with Ultramid® F Balance

34 %
Bio-based
Carbon*

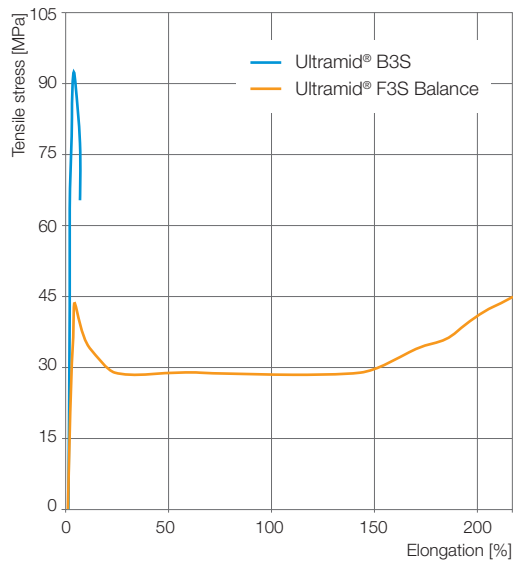
66 %
Fossil
Carbon

Main properties of Ultramid® F Balance

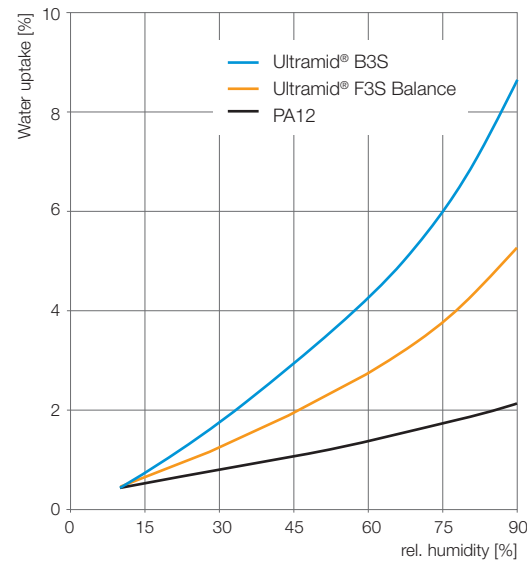
- Based partially on renewable sources
- High transparency level
- Excellent mechanical performance
- Low density
- Good stability against chemicals
- Good adhesion to TPU



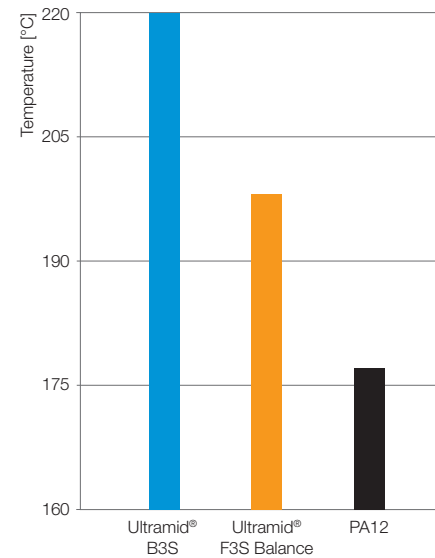
Stress-Strain curve (dry as molded)



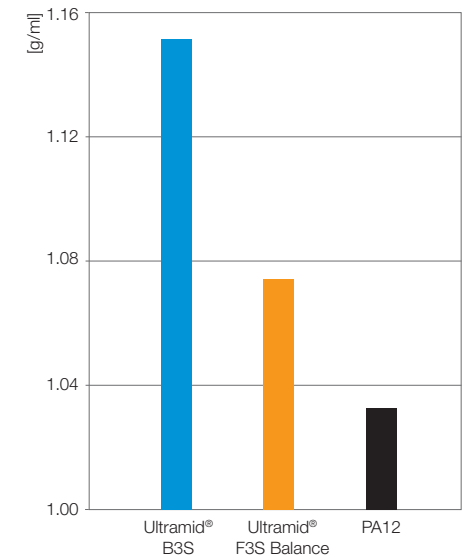
Water uptake



Melting point



Density



* Depending on specific grade and determined by measuring of the ¹⁴C/¹²C and ¹³C/¹²C isotopic ratios using accelerators mass spectrometry as described by ASTM D6866

The transparent and flexible PA

Ultramid® F Balance

Injection molding grades

Characteristic	Test method	Unit	Ultramid® F3S Balance General purpose	Ultramid® F3Z Balance High impact
MVR 275 °C / 5kg	ISO 1133	cm³/10	132	11
Density	ISO 1183	g/cm³	1058	1027
Tensile modulus (dry/cond.)	ISO 527	MPa	1409 / 483	996 / 448
Yield stress (dry/cond.)	ISO 527	MPa	43 / 27	29 / 22
Yield strain (dry/cond.)	ISO 527	%	4.2 / 27	4.3 / 27
Elongation at break (dry/cond.)	ISO 527	%	320 / 330	200 / 250
Charpy unnotched (dry/cond.)	ISO 179/1eU	kJ/m²	NB / NB	NB / NB
Charpy notched (dry/cond.)	ISO 179/1eA	kJ/m²	6 / 90	106 / NB
Charpy notched (-30 °C) (dry/cond.)	ISO 179/1eA	kJ/m²	6 / 9	26 / 28
Share bio-based feedstock		%	34	17
Transparent at 2mm			Yes	No

Key properties

	Ultramid® F Balance	Ultramid® Vision B3K	PA12	Styrenics (e.g. MABS)	PC
Toughness (RT)*	++	+	++	0	+
Optical properties**	+	0	+	++	++
Density	+	0	++	0	-
Media resistance	+	+	+	-	-
Heat distortion temperature	-	+	+	0	+
Based on renewables	+	-	-	-	-

* Especially Ultramid® F3Z Balance ** Especially Ultramid® F3S Balance

Potential applications in appliances, sports & leisure, furniture as well as transportation:

Appliance housings & parts, viewing windows, flexible parts, level indicators, pencil housings, sport articles and many more.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. (September 2020)



E-Mail: plas.com@basf.com
www.ultramid.basf.com