Product Information **Ultramid®**

eXten D 458P BLACK

PA610

Product description

Ultramid® eXten D 458P Black is a high viscosity unfilled plasticized PA6.10 for extrusion applications. This grade is also UV stabilized. This polyamide 6,10 for extrusion is specially performing where high flexibility and toughness are requested. It is specially developed for automotive and other applications where a long term high temperature usage is requested. It is a partially bio-sourced material.

Extrusion Notes

PROCESSING GUIDE

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment.

Recommended maximum water content: 0,10 %

Drying conditions: 8h at 80°C with dry air, dew point -35°C

EXTRUDER DESIGN:

Screw type: PA type (with short transition length, 4D or less) recommended but standard type (with medium transition length, 5 to 7D) acceptable in most cases.

Screw length: Typical L/D~24-28

Screw compression rate: 3 to 4:1

Steel advice for tools: For unfilled polyamide, BASF recommends of the use of high alloy steel with a weak chromium content. For example: 35NC6 or 35CD4.

Disclaimer

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitutive for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANDABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document, and BASF SE is at their disposal to supply any additional information.

Safety Information

Detailed information regarding safety are available on the safety data sheet (MSDS). MSDS is sent with the first material order or available by contacting our customer services

Regulations Compliance

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

This grade complies with RoHS Directive 2011/65/EU, 2015/863 and local regulations as amended.

Grades produced or imported in Europe comply with REACH directive 1907/2006/EC as amended.

Customer Services

Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:
- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

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Product Information

We create chemistry

Typical values for uncoloured product at 23 °C[1)]	Test method	Unit	Values[2)]
General Properties			
North America	-	-	**+**
Asia Pacific	-	-	**+**
South and Central America	-	-	**+**
Near East/Africa	-	-	**+**
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	**E**
Colour; black (bk), uncoloured (un), coloured (co), transparent (tr)	-		**bk**
Pellets	-	-	**+**
Physical			
Water absorption, 24 h in water, 23 °C	ISO 62	%	**0.46**
Water absorption, equilibrium in water at 23°C	similar to ISO 62	%	**1.8**
Density	ISO 1183	kg/m³	**1040 / -**
Mechanical properties			**dry / cond.**
Tensile modulus	ISO 527-1/-2	MPa	**850 / 600**
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	**33 / 30**
Stress at break	ISO 527-1/-2	MPa	**40 / 35**
Strain at break	ISO 527-1/-2	%	**>200 / >200**
Flexural modulus	ISO 178	MPa	**690 / 470**
Charpy notched impact strength ISO 179/1eA (23°C)	ISO 179/1eA	kJ/m²	**100 / 120**
Charpy impact strength ISO 179-1eU (23°C)	ISO 179/1eU	kJ/m²	**N / N**
Thermal properties			
HDT A (1.80 MPa)	ISO 75-1/-2	°C	**51**
Melting temperature, DSC (10°C/min)	ISO 11357-1/-3	°C	**215**
Flammability			
Burning Behav. at 1.6 mm nom. thickn.	IEC 60695-11-10	class	**HB**
Burning Behav. at thickness 0.8 mm	IEC 60695-11-10	class	**HB**
Burning Behav. at thickness 3.2 mm	UL-94, IEC 60695	class	**HB**
Extrusion Notes			
Extrusion cylinder temperature 1		°C	**205 - 225**
Extrusion cylinder temperature 2		°C	**215 - 235**
Extrusion cylinder temperature 3		°C	**220 - 240**
Extrusion, Die temperature		°C	**215**