

## POLYMER SOLUTIONS

# PA 2200

## Material Data Sheet

**PA 2200**

## Product Description

PA 2200, based on polyamide 12, offers a wide range of applications thanks to its very balanced property profile and is the most proven material on the market.

PA 2200 is also available as the EOS Responsible Product PA 2200 CarbonReduced. It combines a heavily reduced CO<sub>2</sub>e footprint with the well-known technical properties of PA 2200.

The advantage of the process parameter Balance, at 120µm layer thickness, lies in its ability to balance different factors at the same time, e.g., production costs, mechanical properties, surface quality and accuracy. Therefore it is suitable for parts with varying geometries, dimensions and requirements.

### MAIN CHARACTERISTICS

- Balanced property profile
- Multipurpose material
- Compliant to (EU) No. 1935/2004 and GMP

### TYPICAL APPLICATIONS

- Production equipment like grippers, jigs and fixtures
- Surgery cutting guides and bone models for the medical industry
- Eyewear in the consumer goods industry
- Spare parts like brackets or covers, e.g., in the automotive industry
- Functional parts for prototyping that include hinges or threads

MECHANICAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
<b>Tensile Modulus</b>			ISO 527-1/-2
X Orientation	1650 / -	MPa	
Y Orientation	1650 / -	MPa	
Z Orientation	1650 / -	MPa	
<b>Tensile Strength</b>			ISO 527-1/-2
X Orientation	48 / -	MPa	
Y Orientation	48 / -	MPa	
Z Orientation	42 / -	MPa	
<b>Strain at Break</b>			ISO 527-1/-2
X Orientation	18 / -	%	
Y Orientation	18 / -	%	
Z Orientation	4 / -	%	
<b>Flexural Modulus</b>			ISO 178
X Orientation	1500 / -	MPa	
<b>Charpy Impact Strength (+23°C)</b>			ISO 179/1eU
X Orientation	53 / -	kJ/m <sup>2</sup>	
<b>Charpy Notched Impact Strength (+23°C)</b>			ISO 179/1eA
X Orientation	4.8 / -	kJ/m <sup>2</sup>	
<b>Izod Notched Impact Strength (+23°C)</b>			ISO 180/1A
X Orientation	4.4 / -	kJ/m <sup>2</sup>	
<b>Shore D Hardness</b>			ISO 7619-1
X Orientation	75 / -	-	

THERMAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
<b>Melting Temperature</b>	176	°C	ISO 11357-1/-3
<b>Temperature of Deflection under Load 1.80 MPa</b>			ISO 75-1/-2
X Orientation	64	°C	
Z Orientation	57	°C	
<b>Temperature of Deflection under Load 0.45 MPa</b>			ISO 75-1/-2
X Orientation	157	°C	
Z Orientation	145	°C	
<b>Vicat Softening Temperature</b>			ISO 306/B50
X Orientation	176	°C	
<b>Burning Behavior</b>	HB, Test passed	class	UL 94
Thickness Tested	0.5	mm	
<b>Burning Behavior</b>	HB, Test passed	class	UL 94
Thickness Tested	1.6	mm	
<b>Burning Behavior</b>	HB, Test passed	class	UL 94
Thickness Tested	3.2	mm	

ELECTRICAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
<b>Comparative Tracking Index CTI</b>			IEC 60112
<b>X Orientation</b>	≥600 / -		
<b>Y Orientation</b>	≥600 / -		
<b>Z Orientation</b>	≥600 / -		

OTHER PROPERTIES	VALUE	UNIT	TEST STANDARD
<b>Density</b>	0.93	g/cm <sup>3</sup>	EOS Method
<b>Powder Color</b>	white	-	-
<b>Components Color</b>	white	-	-

#### HEADQUARTERS

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This powder has not been developed, tested or certified as a medical device according to Directive 93/42/EEC (MDD) or Regulation (EU) 2017/745 (MDR) and is not intended to be used as a medical device, in particular for the purposes specified in Art. 2 No. 1 MDR. Insofar as you intend to use the powder as raw material for the manufacture of pharmaceutical products or medical devices (e.g. as raw material which as a material must meet the requirements of Annex 1, Chapter II MDR), the responsibility and liability for all analyses, tests, evaluations, procedures, risk assessments, conformity assessments, approval and certification procedures as well as for all other official and regulatory measures required for this purpose shall lie solely with you both with regard to the pharmaceutical product and/or medical device manufactured by you and with regard to the properties, suitability, testing, evaluation, risk assessment, other requirements for use of the powder as raw material. In this respect, the limitations of liability pursuant to our General Terms and Conditions and the system sales or material contracts shall apply.

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