

## POLYMER SOLUTIONS

# PA 2200 CarbonReduced Balance

## Material Data Sheet

## PA 2200 CARBONREDUCED BALANCE

## Product Description

PA 2200 CarbonReduced, 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 CarbonReduced is an EOS Responsible Product. 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

- 100% proven quality and 45% less CO<sub>2</sub>e
- Balanced property profile
- Multipurpose material

### 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>Nominal 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, 0.50 mm nom. Thickness</b>	HB	class	UL 94
Thickness Tested	0.5	mm	
<b>Burning Behavior, 1.60 mm nom. Thickness</b>	HB	class	UL 94
Thickness Tested	1.6	mm	
<b>Burning Behavior, 3.2 mm nom. Thickness</b>	HB	class	UL 94
Thickness Tested	3.2	mm	

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

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

HEADQUARTERS

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