

## MARPOL® COPP 20.3

**Product Description** 

Marco Polo International, LLC - Polypropylene Impact Copolymer

Wednesday, December 13, 2023

## **General Information**

MARPOL COPP 20.3 is a high crystallinity, high impact copolymer resin with medium melt frow rate and excellent processing attributes. It is designed to optimize cycle times by improving mold release on injection molded parts.

General				
Material Status	Commercial: Active			
Availability	<ul><li> Africa &amp; Middle East</li><li> Asia Pacific</li></ul>	<ul><li>Europe</li><li>Latin America</li></ul>	North America	
Additive	Antistatic	<ul> <li>Nucleating Agent</li> </ul>		
Features	<ul> <li>Antistatic</li> <li>Balanced Stiffness/Toughness</li> <li>Excellent Processability</li> <li>Fast Molding Cycle</li> </ul>	<ul><li>Good Mold Release</li><li>High Impact Resistance</li><li>Highly Crystalline</li><li>Impact Copolymer</li></ul>	<ul><li>Medium Flow</li><li>Nucleated</li></ul>	
Uses	<ul><li> Appliances</li><li> Compounding</li><li> Consumer Applications</li></ul>	<ul><li>Crates</li><li>Industrial Applications</li><li>Packaging</li></ul>	Tool/Tote Box	
Appearance	Natural Color			
Forms	• Pellets			
Processing Method	Compounding	<ul> <li>Injection Molding</li> </ul>		

ASTM & ISO Properties <sup>1</sup>						
Physical	Nominal Value	Unit	Test Method			
Density	0.900	g/cm <sup>3</sup>	ASTM D1505			
Melt Mass-Flow Rate (230°C/2.16 kg)	19	g/10 min	ASTM D1238			
Mechanical	Nominal Value	Unit	Test Method			
Tensile Strength <sup>2</sup> (Yield)	23.8	MPa	ASTM D638			
Tensile Stress (Yield)	23.1	MPa	ISO 527-2/50			
Tensile Elongation <sup>2</sup> (Yield)	4.5	%	ASTM D638			
Tensile Strain (Yield)	4.2	%	ISO 527-2/50			
Flexural Modulus - 1% Secant						
3	1280	MPa	ASTM D790A			
4	1480	MPa	ASTM D790B			
Flexural Modulus <sup>5</sup>	1280	MPa	ISO 178			



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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.4	kJ/m <sup>2</sup>	
-20°C	7.6	kJ/m <sup>2</sup>	
0°C	9.0	kJ/m <sup>2</sup>	
23°C	14	kJ/m <sup>2</sup>	
Notched Izod Impact (23°C)	160	J/m	ASTM D256A
Notched Izod Impact Strength			ISO 180/1A
-40°C	7.1	kJ/m <sup>2</sup>	
-20°C	7.8	kJ/m <sup>2</sup>	
23°C	14	kJ/m <sup>2</sup>	
Gardner Impact <sup>6</sup> (-29°C, 3.18 mm)	22.3	J	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	105	°C	
Deflection Temperature Under Load			ISO 75-2/B
0.45 MPa, Unannealed	88.3	°C	
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	50.0	°C	
Notes			
<sup>1</sup> Typical properties: these are not to be construed as specifications.			
<sup>2</sup> 51 mm/min			
<sup>3</sup> 1.3 mm/min			
<sup>4</sup> 13 mm/min			
<sup>5</sup> 2.0 mm/min			

<sup>6</sup> Geometry GC



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