# Naturacell® 24

#### Cellulose Acetate

Rotuba Extruders, Inc.

### Message:

Wood-based polymer

Naturacell is a durable, attractive, plant-based plastic resin that can be reprocessed and reused in most applications. Best of all, it works with your existing tooling. So you can incorporate it into your products right away.

Naturacell<sup>™</sup>'s extraordinary physical properties make it not only an environmentally friendly plastic, but also an ideal material for thousands of consumer products:

Tough impact strength Superior clarity and transparency High surface gloss Strong chemical resistance Warm to the touch

General Information	
Additive	Plasticizer (24) 2
Features	Highlight
	Impact resistance, good
	Updatable resources
	Good chemical resistance
	Definition, high
Uses	Cosmetic Packaging
	Handle
	Packaging
	Films
	Label
	Electrical/Electronic Applications
	Personal care
	Pipe fittings
	Home appliance components
	Furniture
	Car interior equipment
	Car exterior decoration
	Sporting goods
	Toys
	Stationery
	Toothbrush handle
	Glasses
	Bathroom accessories
Appearance	Opacity

### Clear/transparent

Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)	2.4	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 - 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	2.2 - 2.6	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	88		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield	53.8	МРа	ASTM D638
Fracture	53.8	MPa	ASTM D638
Tensile Elongation (Break)	15	%	ASTM D638
Flexural Modulus	1770	MPa	ASTM D790
Flexural Strength (Yield)	57.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	120 - 260	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	65.0 - 95.0	°C	ASTM D648
1.8 MPa, not annealed	50.0 - 87.2	°C	ASTM D648
Vicat Softening Temperature	90.0 - 126	°C	ASTM D1525
Optical	Nominal Value	Unit	Test Method
Transmittance (1520 μm)	> 90.0	%	ASTM D1003
Haze (1520 μm)	< 8.5	%	ASTM D1003
Additional Information	Nominal Value		
Flow Designation	H2		
Injection	Nominal Value	Unit	
Drying Temperature	66 - 71	°C	
Drying Time	2.0 - 3.0	hr	
Rear Temperature	182 - 193	°C	
Middle Temperature	182 - 193	°C	
Front Temperature	188 - 199	°C	
Nozzle Temperature	199 - 210	°C	
Mold Temperature	38 - 82	°C	
Injection Pressure	13.8	MPa	
Back Pressure	0.00 - 0.448	MPa	

Vent Depth	0.051 - 0.76	mm
Injection instructions		

Injection Cycle Times: 2 to 12 secsBooster Cycle Time: 6 to 12 secCure Time: 10 to 70 sec

Extrusion	Nominal Value	Unit	
Melt Temperature	193 - 210	°C	

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### Recommended distributors for this material

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