Impact Modified PLA Bioplastic Compounds

PLA BIOPLASTIC COMPOUNDS FROM RTP COMPANY

- Bridge the performance gap between petroleum based plastics and neat PLA
- Produce select semi-durable and durable products with bio-based, sustainable materials
- Balance bio-content, properties, and cost to meet your requirements

ADDITIONAL BENEFITS

- **Meet demand for environmentally friendly goods.**
- **Excellent balance of stiffness and impact strength.**
- **Nucleation improves thermal performance.**
- **Tailor performance to application requirements.**
- **Fully colorable for easy product branding.**
- **Translucent or opaque formulations.**
- **FDA compliant grades.**
- **Bio-content for LEED, EPEAT, and BioPreferred certifications.**

Imagine using polylactic acid (PLA) compounds, which utilize resin derived from renewable and sustainable agricultural resources, to produce environmentally friendly products with mechanical properties that are similar to common petroleum based thermoplastics such as ABS, acrylic, and high impact polystyrene. At RTP Company, we not only imagined it, we've made them a reality.

Growing marketplace demand for environmentally friendly products has led RTP Company to develop an expanded line of PLA bioplastic compounds. Resulting impact modified, nucleated, and mineral reinforced compounds make PLA suitable for select semi-durable and durable products.

Mineral reinforced and nucleated PLA compounds provide increased thermal performance and shorten molding cycle times. Impact modified grades are available in translucent or opaque versions and can also incorporate FDA compliant ingredients. All are fully colorable and a high gloss surface finish is easy to obtain.

A full range of PLA bioplastic compounds allows cost, performance, and renewable resource content to be tailored to individual application specifications. Bio-content in PLA compounds can range up to 95% depending on end-use requirements.

PLA bioplastics compounds can be used in an array of innovative products. Potential applications include products in industries such as consumer electronics, lawn and garden products, medical devices, office equipment and supplies, sporting goods, and toys.

Products made with PLA are considered environmentally friendly because its production uses 50% less energy and produces 60% less CO2 than petroleum based plastics like PET, PS, PC, and nylon. The use of renewable content is also valued by industry certification such as LEED, EPEAT, and the USDA BioPreferred label that increase a product's marketability.

Impact modified PLA bioplastic compounds…another innovation from RTP Company: your global compounder of custom engineered thermoplastics. Contact your local sales engineer to find out if bioplastic compounds are suitable for your application.

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ISO 9001 REGISTERED FACILITIES

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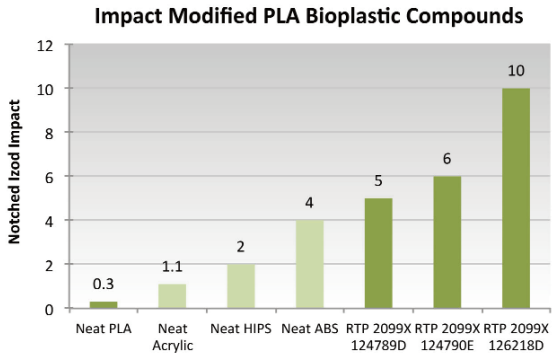
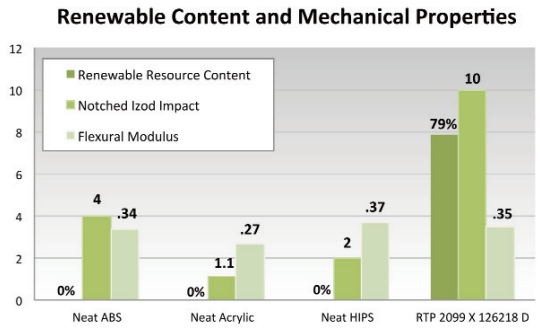
Take your "green" products from the drawing board to reality





RTP PRODUCT	RENEWABLE CONTENT	NOTCHED IZOD ASTM D 256	TENSILE STRENGTH ASTM D 638	FLEXURAL MODULUS ASTM D 790	HDT @ 66 psi (455 kPa) ASTM D 648
RTP 2099 X 124790 A Medium Impact, Fast Cycle, High HDT, 10% Talc	78%	1.8 ft-lbs/in • 96 J/m	7,000 psi • 48 MPa	0.60 psi x 10^6 • 4,137 MPa	195 °F • 90 °C
RTP 2099 X 124790 B High Impact, Fast Cycle, High HDT, 10% Talc	68%	3.5 ft-lbs/in • 187 J/m	5,500 psi • 38 MPa	0.50 psi x 10^6 • 3,448 MPa	160 °F • 71 °C
RTP 2099 X 124790 C Medium Impact, Standard Cycle, 10% Talc	78%	1.5 ft-lbs/in • 80 J/m	6,500 psi • 45 MPa	0.60 psi x 10^6 • 4,137 MPa	180 °F • 82 °C
RTP 2099 X 124790 D High Impact, Standard Cycle, 10% Talc	68%	3.4 ft-lbs/in • J/m	5,200 psi • 36 MPa	0.50 psi x 10^6 • 3,448 MPa	150 °F • 65 °C
RTP 2099 X 124790 E High Impact, Fast Cycle, 10% Calcium Carbonate	73%	6.0 ft-lbs/in • 182 J/m	5,700 psi • 39 MPa	0.45 psi x 10^6 • 3,103 MPa	145 °F • 63 °C
RTP 2099 X 124790 F Medium Impact, Fast Cycle, 30% Calcium Carbonate	53%	1.5 ft-lbs/in • 80 J/m	4,600 psi • 32 MPa	0.60 psi x 10^6 • 4,137 MPa	165 °F • 74 °C
RTP 2099 X 124789 A Impact Modified, Lower Cost, Clear	94%	0.5 ft-lbs/in • 27 J/m	9,000 psi • 62 MPa	0.49 psi x 10^6 • 3,379 MPa	124 °F • 51 °C
RTP 2099 X 124789 B Impact Modified, Clear	89%	0.9 ft-lbs/in • 48 J/m	8,000 psi • 55 MPa	0.44 psi x 10^6 • 3,034 MPa	124 °F • 51 °C
RTP 2099 X 124789 C Medium Impact, Clear	84%	1.5 ft-lbs/in • 80 J/m	7,000 psi • 48 MPa	0.41 psi x 10^6 • 2,287 MPa	124 °F • 51 °C
RTP 2099 X 124789 D High Impact, Clear	79%	5.0 ft-lbs/in • 267 J/m	6,000 psi • 41 MPa	0.37 psi x 10^6 • 2,551 MPa	124 °F • 51 °C
RTP 2099 X 126211 Z Impact Modified, FDA Compliant, Clear	89%	0.8 ft-lbs/in • 43 J/m	6,700 psi • 46 MPa	0.44 psi x 10^6 • 3,034 MPa	124 °F • 51 °C
RTP 2099 X 126218 A Impact Modified, Lower Cost, Opaque	94%	0.6 ft-lbs/in • 32 J/m	8,500 psi • 59 MPa	0.47 psi x 10^6 • 3,241 MPa	124 °F • 51 °C
RTP 2099 X 126218 B Medium Impact, Opaque	89%	1.0 ft-lbs/in • 53 J/m	7,300 psi • 50 MPa	0.44 psi x 10^6 • 3,034 MPa	124 °F • 51 °C
RTP 2099 X 126218 C High Impact, Opaque	84%	3.5 ft-lbs/in • 187 J/m	6,400 psi • 44 MPa	0.39 psi x 10^6 • 2,689 MPa	124 °F • 51 °C
RTP 2099 X 126218 D Super High Impact, Opaque	79%	10.0 ft-lbs/in • 534 J/m	5,500 psi • 38 MPa	0.35 psi x 10^6 • 2,413 MPa	124 °F • 51 °C
RTP 2099 X 126217 Z Super High Impact, FDA Compliant, Opaque	79%	12.0 ft-lbs/in • 641 J/m	5,700 psi • 39 MPa	0.36 psi x 10^6 • 2,482 MPa	124 °F • 51 °C

Glass fiber reinforced compounds and thermoplastic alloys using PLA are also available from RTP Company

RTP Company: Your Global Compounder Of Custom Engineered Thermoplastics