
# TECHNICAL DATA SHEET

from the earth, to the earth®, we are REearthable®

ecoPLAS® by REearthable® is a Biodegradable and Industrial Compostable Plastic alternative that continues to sequester captured carbon dioxide, one manufactured object at a time.

**Product Description**

ecoPLAS® is a biodegradable (ASTM D5511) and compostable (ASTM D5338) limestone (CaC03) based material series that conforms to the FDA food contact safe (G.R.A.S.) specification, with an option if G.R.A.S. compliance is not necessary.

Our patented formula was designed to address sustainability objectives of lowering overall carbon footprint, minimizing the impact on CO2 production while taking advantage of drop-in ready alternative materials requiring no manufacturing changes.

- Drop in ready; No manufacturing processing or equipment changes required
- Food contact safe (G.R.A.S.) or optional formulation if not required
- Off white pellets in their natural, un-dyed processed form, ±0.015" in size
- **Pre drying** of pellets is necessary for material performance (recommended 100 ppm/.001% or less). Dry at ~150-170°F for 4-6 hours depending on equipment. Test with a lab moisture analyzer for best results.

**Applications**

**Suitable for 3D print/Additive Manufacturing, Thermoform/Sheet and Injection Molding**

ecoPLAS® is suitable for Additive Manufacturing/3D Print (large and small format), Sheet film extrusion, Injection Molding, Thermoforming and other similar processing applications.

**Form / Storage**

ecoPLAS® is supplied in pellet form in bulk containers and requires pre drying prior to processing. The material can be stored at ambient room temperature for up to 24 months in a sealed container which must be dried before processing.

**Intellectual Property**

It is the responsibility of those to whom we supply our products to ensure that any proprietary rights, laws and legislation are observed. All ecoPLAS® uses and product obtained are subject to and protected by intellectual property rights. Purchase of ecoPLAS® does not entitle the buyer or any third to produce, offer or use ecoPLAS® or any blends thereof.


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**Typical Properties of ecoPLAS® by REearthable® Material**

| | Value | Unit | Method |
|---|---|---|---|
| **Mechanical** | | | |
| Tensile Modulus | 1.6 | GPa | ASTM D638 |
| Tensile Strength at Yield | 23 | MPa | ASTM D638 |
| Tensile Strength at Break | 18 | MPa | ASTM D638 |
| Tensile Elongation at Yield | 3.7 | % | ASTM D638 |
| Tensile Elongation at Break | 16 | % | ASTM D638 |
| Flexural Modulus | 1.6 | GPa | ASTM D790 |
| Hardness | 71 | shore D | ASTM D2240 |
| Notched Charpy Impact Strength | 84 | J/m | ASTM D6110 |
| Notched Izod Impact Strength | 77 | J/m | ASTM D256 |
| **Physical** | | | |
| Density | 1.46 | g/cc | ASTM D792 |
| Melt Flow Index (165°C, 2.16kg) | 2.75 | g/10min | ASTM D1238 |
| **Thermal** | | | |
| Glass Transition Temperature | 59 | °C | ASTM D3418 |
| Melting Temperature | 153.3 | °C | ASTM D3418 |

**Note / Disclaimer:**
The information supplied is based on our current knowledge as the values presented herein are typical laboratory values and may vary within ranges.

Given the many factors that may affect processing and applications, the data does not relieve processors of their responsibility to carry out their own validation. The applicability or suitability of our products cannot be guaranteed outside of this data. It does not necessarily indicate results a recipient may attain and does not imply any legally binding assurance for a particular purpose.

It is the responsibility of those to whom we supply our products to ensure any proprietary rights, laws and legislations are observed including the marketing use of any such claims.

**For more information, please contact us:**
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**ADDITIONAL COMPLIANCES:**
Japan Positive List | CA Proposition 65
EU 10/2011 | EC 1935/2004
EC 2023/2006 | RoHS
Zero ‘forever chemicals’ (PFAS)

SOURCED AND MADE IN THE USA

BIODEGRADABLE | INDUSTRIAL COMPOSTABLE | FDA GRAS | BPA FREE | USDA CERTIFIED BIO BASED | ZERO PHTHALATES