

FAQ - Green Dot GDH-B1 Compostable Bioplastic

Company Progress

- 2009** - Green Dot Holdings incorporated
- 2010** - GDH-B1 tested and verified to meet U.S. and E.U. standards for compostability
- 2011** - opened headquarters in Cottonwood Falls, Kansas
- 2011** - introduces the world's first compostable soft plastic iphone case
- 2012** - named as top 25 social entrepreneur in America by Bloomberg Businessweek
- 2012** - finalist for International Bioplastics Award presented at European Bioplastics Conference
- 2013** - acquired bioplastics division of MGP Ingredients

Terratek® bioplastics

Terratek bioplastics combine environmental benefits and uncompromising quality to provide highly functional, cost competitive alternatives to traditional thermoplastics. Our broad range of biobased and compostable plastics are not just greener, they're better.

Terratek® Starch Composites

Terratek SC bioplastics provide effective solutions to meet the growing demand for eco-friendly biobased goods. Terratek SC bioplastics can be injection molded or extruded using standard processing machinery. The bioplastic is capable of withstanding temperatures beyond boiling. Because these unique biobased composites can be formed into a variety of shapes and sizes, they have virtually unlimited application in the production of both pliable and hard plastic products.

Green Dot's **Terratek SC50** and **SC65** products are certified as biobased materials under the USDA's BioPreferred® Program. Products made with these resins may also qualify under this program and be given preferential treatment in Federal government purchasing contracts.

Terratek® Wood Plastic Composites

Terratek WC wood plastic-composites provide the pleasing look of wood with the functionality and manufacturing ease of plastic. The wood-plastic composites combine fine wood particles with virgin or recycled plastic materials to create firm, smooth pellets for convenient handling and further processing. The wood particles are obtained from waste materials generated by lumber manufacturers and processed to produce a consistent reinforcing material. The use of these particles promotes the reclamation of wood waste that would otherwise be sent to landfills and ensures that no new trees are cut down to make the product.

Terratek WC can contain up to 60% wood content, significantly reducing dependence on petroleum based plastic materials, while simultaneously promoting the use of reclaimed materials. Terratek WC can be produced from a variety of wood types, including maple, oak and pine. They are available in injection molding and extrusion grades. Applications include, decking furniture, structural components, indoor and outdoor decorative items, etc.

Terratek® Biodegradable Composites

Terratek BD biodegradable composites are created from a proprietary combination of starch-based materials and other ingredients, all of which meet industry standards for compostability. Principal uses include, but certainly are not limited to, the manufacture of packaging materials and containers.

With a Heat Deflection Temperature (HDT) of 199° F at 66 psi, **Terratek BD** biodegradable composites offer superior heat performance when compared to most other bioplastic products. Terratek BD bioplastic possesses strength and pliability. It can be used for injection molding or extrusion.

Terratek® Compostable Elastomers

Terratek Flex GDH-B1 is the market's first bioplastic elastomer verified to meet U.S. (ASTM D6400) and E.U. (EN 13432) standards for compostability in an industrial composting environment. The bioplastic will decompose in a backyard composting environment as well.

Terratek Flex is strong, durable and pliable with an exquisite soft touch. The rubber-like material is ideal for toys, electronics cases, accessories and industrial or agricultural applications where strength and compostability provide a functional advantage.

Terratek Flex GDH-B1 has been tested by NSF International and is verified to meet child safety standards in the U.S., Canada, Europe, Australia and New Zealand.

Terratek Flex is suitable for most plastics processes, including injection molding, profile extrusion, extruded sheet, thermoforming and blow molding.

How is GDH-B1 different from other bioplastics (PLA, PHA etc)

- In the past compostable bioplastics have been used for disposable goods. These materials were brittle, fragile and melted at low temperatures. GDH-B1 is the world's first commercially available compostable elastomeric bioplastic, GDH-B1 is strong, pliable and durable it also has superior heat resistance compared to PLA and PHA. GDH-B1 is ideal for making long lasting durable goods that will return to nature after their useful life has ended.

Why is GDH-B1 better?

- **Better for durable goods** - GDH-B1 is better suited than traditional bioplastics for durable goods that require a strong material that is flexible
- **Renewable & toxin free** - Unlike traditional petroleum based elastomers, GDH-B1 is renewably sourced, tested by NSF to be safe from toxins like lead, cadmium, phthalates and BPA
- **Compostable** - GDH-B1 is the only elastomer that is verified to meet U.S. and E.U. standards for compostability.

What should I do with a product made with GDH-B1 after its useful life has ended?

GDH-B1 is designed to be returned to nature by placing the material in either an industrial composting environment, or in your back yard compost.

- **Industrial composting** environments maintain a temperature of approximately 130 F and are maintained to assure proper aeration. Compostability tests are based on an approximation of these conditions.
- **GDH-B1 will break down in backyard compost** - unlike many bioplastics, GDH-B1 will break down in a backyard composting environment as well. This process may take a little more time, however, the material will substantially decompose after several month in a backyard compost.

Will it break down in my pocket?

- **Only in a microbial environment** - GDH-B1 is designed to be durable. The material will only break down in a microbial environment. So unless you're carrying around some pocket mulch the material will not degrade until its useful life has ended.

About Green Dot

Our Mission: Green Dot aspires to improve the environment in which we live by building a more sustainable world with renewable biobased resins and promoting their use through invention, creation and research.

Green Dot Holdings LLC is a bioscience social enterprise headquartered in Cottonwood Falls, Kansas. We're a full-service bioplastics company dedicated to delivering the very best to our customers. That's why we offer our Terratek line of bioplastics, developed to meet the growing demand for biobased and compostable materials.

Green Dot provides unrivaled customer focus. from our Product Development Lab, to our in-house industrial product design team, to our expert plastics technicians, we help companies make the innovative sustainable products that consumers are seeking.

Green Dot is committed to providing sustainable materials of uncompromising quality so that everyone can contribute to a more sustainable world.