



biome
bioplastics

Great plastics,
naturally

bi•ome

noun Ecology

a large naturally occurring community of flora and fauna occupying a major habitat, e.g., forest or tundra.

ORIGIN early 20th century: from **BIO-** [life] + **-OME**.

An introduction to Biome Bioplastics

Biome Bioplastics Limited is a leading innovator and supplier of biodegradable natural polymers that replace existing oil-based materials in a wide variety of applications. Naturally sourced, our novel polymers have a high sustainable content and can be recycled back to nature.

Until January 2010 Biome Bioplastics was a division of Stanelco PLC. However, following a name change and re-branding it is now a wholly owned subsidiary of the business, providing for a stronger focus upon the bioplastics sector. Our manufacturing facility, located in Germany, is one of the few dedicated bioplastics facilities in the world. The company operates on a global basis with offices in North America and the United Kingdom and agents in other locations.

We take the quality of our product and our process control seriously and are always striving

to improve. We are certified in accordance with DIN EN ISO 9001:2000 and DIN EN ISO 14001:2004. In keeping with the environmental credentials of our product, our facilities are powered by renewable sources



and we are always seeking to reduce our environmental impact. We have a variety of stock points on three continents to ensure that we can deliver rapidly when required.

Our products are certified to the harmonised European (Din Certco) EN13432 and US D6400 compostability standards and accredited with the Vincotte OK Compost label, which

complies with the European Packaging Directive (94/62/EEC). Packaging or products featuring the OK Compost label are guaranteed as biodegradable in an industrial composting plant. The sole reference point for the certification programme is the harmonised EN 13432:2000 standard. They also have food contact approval under the European Plastics Directive 2002/72/EC and FDA.

Our scientific approach ensures that new materials are designed from the molecule upwards resulting in polymers that perform as expected. We have an extensive range of lab facilities that allow us to both test material performance and to run pilot manufacturing and application tests on prototype products. We provide our customers with full applications support for our bioplastic, working with them to enhance the value of their products through development and design.

Applications

From horticulture to electronics, our bioplastics can be found in an ever broadening array of application areas as brand owners and specifiers realise that they can choose our materials for performance and bio-credentials. Bioplastics are now being specified for their renewable content as well as their biodegradation.



● **horticulture/agriculture**
Our products provide the strength and versatility of conventional plastics whilst saving cost on disposal. Plant based sustainable sources appeal to end users in this sector whilst independent tests prove our products enhance soil fertility on decomposition.



● **food service**
Biome bioplastics are proving their worth in the food industry. Whether it's a coffee cup lid or a disposable apron, bioplastics do the job and can be disposed through the composting of food waste.



● **packaging**
Biome bioplastic can be used to form a wide range of packaging items including most food packaging products, for example, bags, wraps, bottle, boxes, trays, etc. Consumers respond positively to the great natural feel of our materials, their sustainable origins and their potential for composting or digestive disposal.



● **personal care/cosmetics**
From razors and toothbrushes to cosmetic bottles and feminine hygiene products, our range of bioplastic can help your products look good and care for the environment.



● **electronics**
Bioplastics are just entering the market of consumer electronic devices. Bioplastics is supporting forward thinking OEMs in this sector and has products suitable for this end-use. Bioplastic cases and boxes can be formed into most product shapes and can deliver suitable structural performance. Our standard colour range is extensive and we can provide specific brand colours as appropriate.



● **fibres/non-wovens**
Our bioplastics can be spun into fibres and used in non-woven materials. This offers the look and feel properties of natural materials through the production route of manmade fibres.



● **automotive**
As auto-makers seek to improve their carbon credentials, they are looking at materials as well as energy efficiency. Bioplastics can be moulded and formed conventionally but have inherently better carbon credentials.



● **industrial**
Industrial users of materials are driven by often conflicting demands for long life and cost effectiveness whilst ensuring their operations have a minimal carbon footprint. Bioplastics perform in this regard whilst underpinning the sustainability of your operations.



● **construction**
Legislation in the form of 'The Code for Sustainable Homes' is driving a change in construction. Bioplastics have a part to play above ground in providing more sustainable materials and reducing waste.



● **other applications**
We are a supplier and trialling partner in a variety of other applications as our customers explore the potential of bioplastics. These include end uses that range from children's toys to temporary paving, cable ties, marketing inflatables and many more.



● **office products**
Our materials are used in office products that are cost effective and have impeccable bio credentials. Whether it's a pen or a folder, bioplastics suggest both quality and responsibility.



Products

Our product range is built on nearly 20 years of development activity. Great bioplastics in their own right, our customers tell us they often process and perform better than anything else they have tried. Our products are all biodegradable and highly renewable. The range is under continual development so do contact us if you cannot see what you need here.



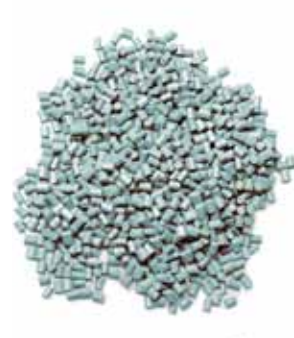
BiomeHT

Newest addition to our product portfolio, the BiomeHT range is a new class of bioplastic with a higher temperature capability whilst retaining great environmental credentials. With a softening point of greater than 90°C, in both dry and aqueous conditions, this is 20-30°C above many other competitive bioplastics.



BiomeCord

BiomeCord is a range of starch based biodegradable materials developed for use in fine fibres, yarns and cords up to 3mm in diameter. We have two variations of BiomeCord depending on your application.



Biome Bioplast GF106/2

This easily processed, potato starch based product gives a soft, flexible film that is extremely strong. Biome Bioplast GF106/2 is also printable by flexographic or offset printing without any pre-treatment and can be coloured with specially designed masterbatches, with no detriment to the superb properties. For food uses Biome Bioplast GF106 has EU & FDA (USA) Food Contact Approval for all non high-acidic foods.



Biome Bioplast Wrap

Suitable for processing on standard blown film lines, this naturally white product produces a paper-like film with a matt or gloss surface, depending on choice. As with all Biome Bioplastics products, Biome Bioplast Wrap 100 may be coloured using specially developed masterbatches, with no detriment to its properties. Films are also suitable for printing either by flexographic or offset printing without any requirement for pre-treatment and provide good heat sealability.



Biome Bioplast TPS

Biome Bioplast TPS is potato starch resin, with only a few additives to make it processable. Despite being greater than 85% starch, it can be extruded into gels, foams and even sheet. This is a truly natural product, with excellent environmental credentials.



Biome Custom

With nearly 20 of years of experience in developing bioplastics, Biome Bioplastics Technical Department are happy to work with you to tailor a product to your specific requirements. Under confidentiality, you can be assured that Biome Custom will give you the confidence you need to develop that new product with the right mechanical or technical properties, or even if you want to use a particular raw material, our team will be happy to advise and work alongside you.



BiomeClear

The benefits of this product are transparent, literally. Most biodegradable films provide only contact clarity; BiomeClear provides a high clarity, low noise film, whilst maintaining the benefits of strength, flexibility and biodegradability.



BiomeEasyFlow

Extrusion coating and lamination have many demands, with high speed processing, adhesion to a range of substrates, barrier properties, printability and sealability being uppermost. These are exacting for conventional plastics, let alone bioplastics. Made from mainly sustainable resources, BiomeEasyFlow products provide easier processing, with lower viscosities than those usually expected from biodegradable resins.



Biome Bioplast GS2189

Biome Bioplast GS2189 is used for injection moulding or sheet extrusion. It processes well on existing moulds and equipment and can be vividly coloured, using specially designed masterbatches, with no detriment to its properties. It is incredibly versatile and can be made into sheet for thermoforming; blown into thin film or injection moulded into virtually any shape.



Biome Bioplast 105

Biome Bioplast 105 is another of our injection moulding grades, produced from over 60% sustainable crop material. With all the attributes of our other grades, this resin offers greater transparency for those clearer products.



Biome Blends

All Biome Bioplastics products can be blended to provide modifications to their properties to meet the specific requirement of the processor or end-user. Maintaining the sustainability, biodegradability and compostability credentials of their Biome Bioplastics components, Biome Blends will provide everything you require to match the properties you desire. Furthermore, our experienced chemists and process engineers are on hand to advise you of the best blends to use.



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