

## BIOflex® Frequently Asked Questions

### Product Specifications

**Q. What percentage of BIOflex is biodegradable?**

A. The patented formula for the biodegradable PVC coating makes up 65% of the product. The remaining 35% is from the polyester scrim.

**Q. Can BIOflex be welded?**

A. Yes. BIOflex works with heat and RF welders. It has been tested with Miller Weldmaster and Leister-Malcom. Copies of machines settings can be acquired by contacting your BIOtech Sales Representative.

**Q. How durable is BIOflex?**

A. This product has a woven 1000 x 1000 denier scrim which is one of the strongest in the market and is tear and fade resistant. It can last years in indoor and outdoor applications depending on weather conditions.

**Q. What inks are compatible with BIOflex?**

A. UV, solvent, eco-solvent and screen printers.

**Q. Why is BIOflex so expensive?**

A. The technology used in making BIOflex is new. The cost of creating this kind of innovative product must be re-coup by amortizing the cost over a period of time.

**Q. What is the good side to using PVC medias?**

A. PVC is strong. It is resistant to oil, chemicals, sunlight and weathering. PVC is also flame resistant, easily decorated and low in cost.

### Formula Details

**Q. Is BIOflex made with any toxic materials?**

A. BIOflex is RHOS compliant. It contains no heavy metals, pesticides, bleaching agents, DOP or similar plasticizers, glycol ether or carcinogenic coloring agents.

**Q. What is BIOflex made with?**

A. Fine particle limestone that provides opacity and plasticizers of organic origin that provides flexibility. 80% of the content of BIOflex is derived from sources other than petroleum.

**Q. How does the PVC biodegrade in the landfill?**

A. Within landfills there are microbes, heat, pressure and little moisture. These microbes utilize the BIOflex PVC as their food source. This has been tested according to ASTM D5526.

**Q. What happens to the carbon and hydrogen content of BIOflex?**

A. The content is partly consumed by the biomass organisms living in the landfill and is partly released as methane from fermentation.

**Q. What happens to the methane released from BIOflex?**

A. In a well-managed landfill the methane is harvested for use as fuel.

**Q. What happens to the chlorine content of BIOflex?**

A. The content is partly consumed and partly converted to soluble chloride.

**Q. Why is converted soluble chloride positive?**

A. Soluble chloride has value as fertilizer since it makes soil nitrogen more rapidly available to plants. In experiments using landfill into which BIOflex had decomposed, as compost in potting soil, vegetables sprouted more rapidly than in controlled vegetable specimens.

**Q. How long does it take for the PVC to biodegrade?**

A. BIOflex PVC will begin to breakdown within 90 days in landfill conditions and depending on thickness and quantity the PVC will vanish in 3 to 5 years.

**Q. Does printing on BIOflex change the biodegrading process?**

A. No. BIOflex PVC will still degrade.

**Q. Will BIOflex begin to degrade in application?**

A. No. BIOflex requires the absence of water and air in order to begin biodegrading. This process begins after the product is disposed into a controlled landfill.

## **Testing & Patents**

**Q. What testing has been done on BIOflex?**

A. BIOflex has been tested by an accredited laboratory using the ASTM D5526 and ISO 13641-1.

**Q. What conclusions can be made from the ASTM D5526?**

A. The data shows that when BIOflex is added to a landfill it does not interfere with its digestion of other materials but rather improves this ability. The ratio of the fraction of organic carbon and hydrogen released into the air and the fraction delivered to the solid biomass varies with landfill conditions such as temperature and water content. The fraction released to the air is mostly methane, which can be harvested for fuel, along with the methane released by other components of the landfill, such as paper.

**Q. Are copies of these test available?**

A. Yes. Copies of these tests can be acquired by contacting either your BIOtech Sales Representative.

**Q. What fire testing has BIOflex passed?**

A. BIOflex has passed the NY MEA; NFPA701 and the CA Fire Marshal Title 19 test. Copies of these tests can be acquired by contacting either your BIOtech Sales Representative.

**Q. Does BIOtech hold the patent for BIOflex?**

A. Yes. A copy of the Patent can be viewed by visiting the US Patent Website at [www.uspto.gov](http://www.uspto.gov). The patent number is 7390841.