

Biosynthetic Technologies' Sustainable Base Oils

Biosynthetic Technologies

Biosynthetic® Technologies manufactures a revolutionary new class of biobased synthetic compounds called Estolides that are made from organic fatty acids found in various bio-derived oils. These highly functional biosynthetic oils have numerous uses in lubricant, automotive, marine, and personal care applications and can be used as the primary base oil of a lubricant formulation, a component of a base oil co-blend, or even as an additive. In addition to their high-performance properties, these oils are:

- Biodegradable
- Sustainable
- Renewable
- Non-bioaccumulative
- Non-toxic

In addition, because Biosynthetic sustainable base oils are compatible with common lubricant base oils and additives, they serve as an easy drop-in for most existing formulations available in the market.

**Biosynthetic® Technologies strives to make their mark
on the world by delivering innovations
for a sustainable future.**

Our Commitment to Sustainability

At Biosynthetic® Technologies, we understand the importance of sustainable manufacturing practices. We are constantly looking for ways to minimize the negative impacts on the environment while conserving energy and natural resources. Our objective is to make sustainability a point of difference for our business, and we are confident that this strategy will generate even greater benefits for the environment in which we operate, the people that we work with and the communities we are part of. Biosynthetic® Technologies is committed to sustainability and clearly focused on the responsible use of natural resources in our daily business. We understand that health, environmental awareness and traceability play just as large a role for consumers as quality and efficacy. Biosynthetic® Technologies is aware of its responsibility in this business and sustainability. As such, our manufacturing facility is operating with a **NEGATIVE** carbon footprint!

Estolide Technology

Our revolutionary new class of biobased synthetic compounds called Estolides. These are naturally derived oils that improve the quality of formulated products and are biodegradable. Estolides are a class of unique bio-based oils with a variety of uses ranging from industrial lubricants to personal care products. Our base oils are 70-90% biodegradable (OECD 301) with 65-95% bio-content (ASTM D6866). Additionally, they displayed no bioaccumulation (OECD 107) and were non-toxic at 1000 mg/mL (OECD 201, OECD 202, OECD 203, OECD 209).

With a highly customizable structure, Estolides' physical properties can be manipulated for specific applications. In addition, their environmental compatibility allows them to be used in widespread industries ranging from lubricants to personal care. Overall, Estolides serve as naturally derived oils that improve the quality of formulated products.

Sustainable Base Oil Products

Biosynthetic Technologies has developed and patented a new class of compounds called Estolides to meet the sustainability challenge for many applications. Our estolide technology can be used in a variety of application ranging from industrial lubricants to personal care products. Our sustainable base oils are especially suitable for the following applications: Food Grade Lubricants, Marine Lubricants, PCMO, and Metalworking Fluids.

Our product range covers 4 sustainable base oils with ISO VG ranging from 22-680.

- **BT4** base oils are low viscosity oils used to produce a wide variety of specialist products including lubricants, metalworking fluids, silicone sealants, plasticizers and water treatment products.
- **BT22** base oils are medium viscosity oils used to produce a wide variety of specialist products including industrial and marine lubricants.
- **BT75** base oils are high viscosity oils used to produce a wide variety of specialist products including industrial and marine lubricants.
- **BT75HP** base oils are extremely suitable for marine applications where separation of the oil and water are essential to the performance of the finished formulation.

In addition to the specialty oils highlighted above, Biosynthetic Technologies can customize high-quality specialty hydrocarbon products to meet your specific requirements across a wide range of applications.

Superior Performance

Biosynthetic® Technologies estolide base oils provide superior wear protection, meaning a fewer costly additives are needed in the final formulation. In addition, estolide base oil shows excellent hydrolytic stability and superior hydrolytic stability. Biosynthetic Technologies base oils provide superior shear stability numbers compared to other high viscosity base stocks, helping your finished lubricants retain their viscosity, even in severe conditions. For more information on the features and benefits as well as testing data please download this document.

Personal Care Products

Biosynthetic Technologies also manufactures a line of products dedicated to the Personal Care market. These products are called BioEstolides™. BioEstolides™, are a stable bio-derived based oils and a natural non-GMO source with unique performance features. These renewable and biodegradable oils deliver high performance benefits as an emollient with enhanced stability, exceptional moisturization characteristics and a light, satiny feel. BioEstolide™ are multi-functional and not only enhance the feel and performance of other cosmetic ingredients, but they come with some powerful benefits of their own.

Certification

Certification is a key strategy in further enhancing Biosynthetic® Technologies into a world class producer of sustainable and high-performance base oils. At Biosynthetic® Technologies we hold the appropriate certifications and registrations to certify our products do not deliver on performance and quality but are also compliant with national and international requirements. For more information on certifications and to download certificates and other related documentation please visit our certifications page.