

Biosynthetic Technologies - Innovative Oleo Chemistries

**WHERE SUSTAINABILITY AND
PERFORMANCE CONVERGE**

Comprehensive Evaluation of Sustainable Raw Materials in Lubricant Production

Our Vision

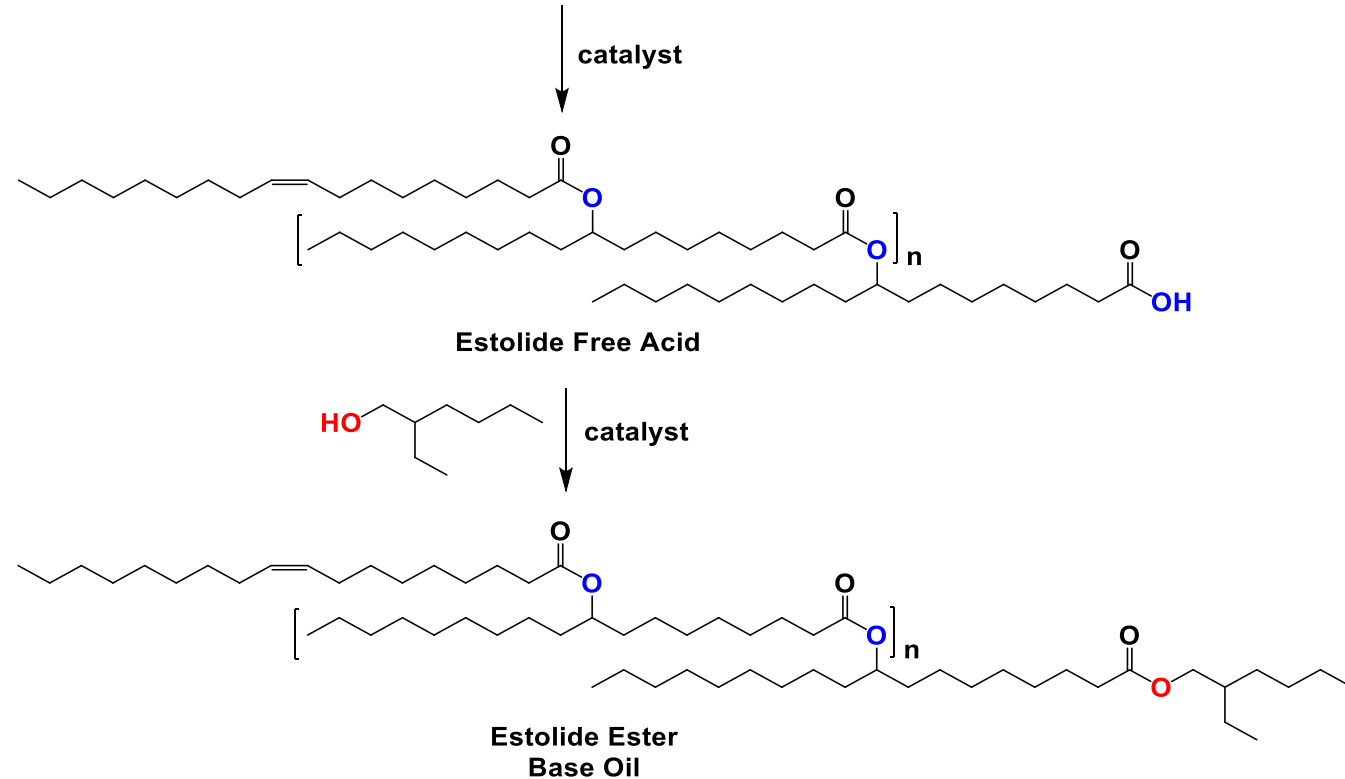
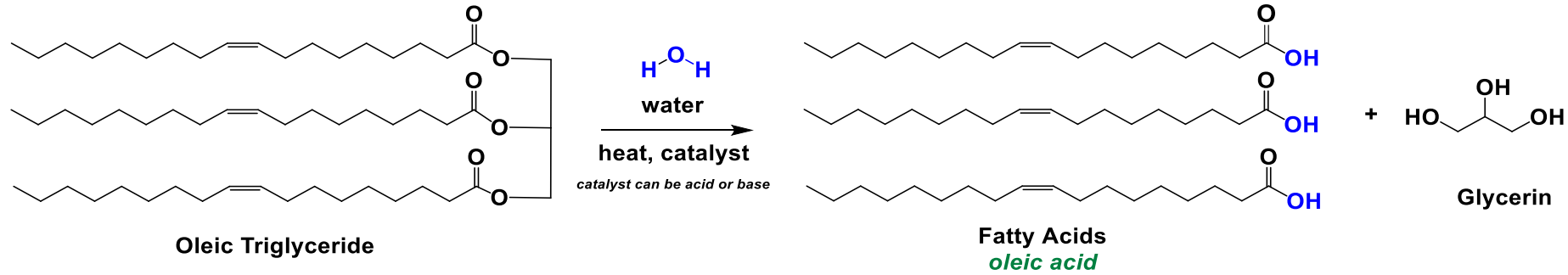
To Deliver Innovative Solutions for a Sustainable Future.

Our Mission

To be the Premier Biobased Products Supplier



From Plants to Estolide Esters



BIOSYNTHETIC TECHNOLOGIES IS THE SUSTAINABLE ALTERNATIVE

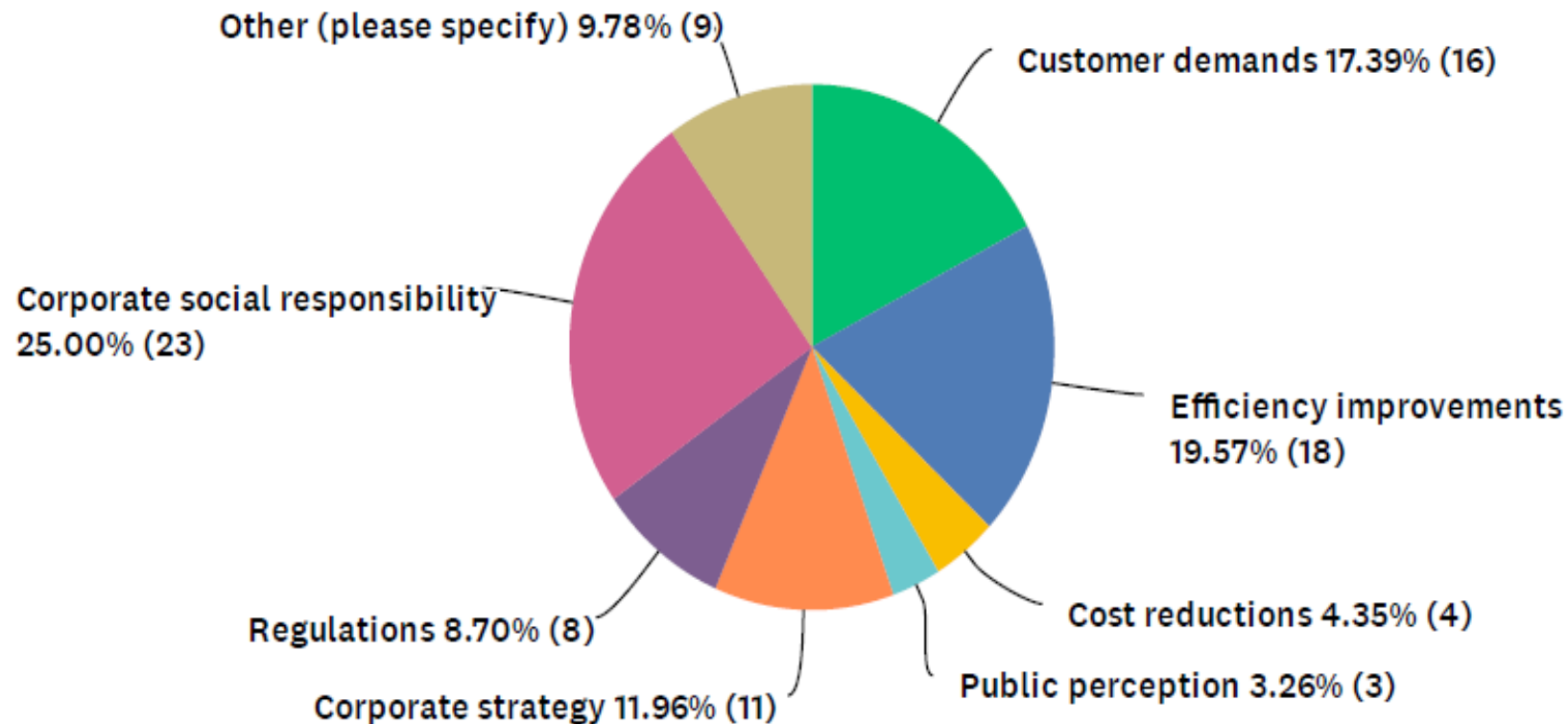
We manufacture *Estolides* – biobased, biodegradable, synthetic base oils.

They are ecofriendly alternatives to petroleum and are being actively sold for industrial lubricants, metal working fluids, and personal care items.



Our Vision: ***To Deliver Innovative Solutions for a Sustainable Future***
Our Mission: ***To be the Global Premier Bio-Synthetic Fluid Supplier***

NLGI Member Survey 2022 Asked: What is the Most Important Aspect of Sustainability for Your Company



Benefits of Biobased Baseoils

- Good biodegradability / low environmental impact
- High viscosity index
- Renewable
- High flashpoint
- Low volatility
- Enhanced lubricity

Bio-based Alternatives To Fossil-based Products Provide A Range Of Benefits To Society

- Reduced human and ecological health risks
- Enhanced energy efficiency
- Fewer environmental emissions
- Less waste
- Reduced use of finite resources

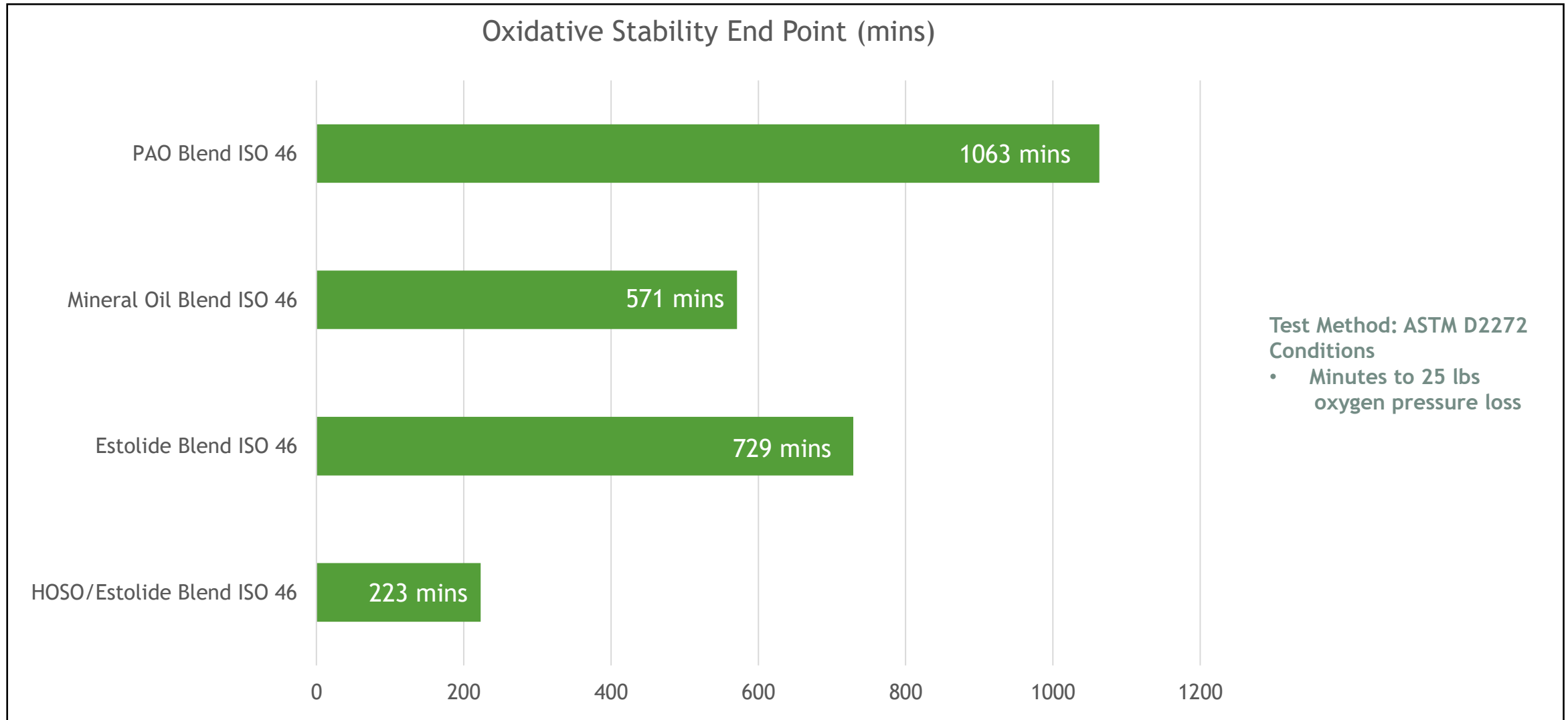
What Is The Value?

Food Grade Hydraulic Performance

Soy - Estolide - Mineral - PAO Comparison

Test Method: ASTM D2619	HOSO/Estolide Blend ISO 46	Estolide Blend ISO 46	Mineral Oil Blend ISO 46	PAO Blend ISO 46
Weight Change of Copper Panel, (mg/cm ²)	-0.067	-0.042	0.0	-0.03
Appearance of Copper Panel	Shiny, 1b	Shiny, 1b	1b	3a
Change in Acid Number, mg KOH/g	0.46	0.29	+0.48	-0.4
Total Acidity of Water Layer, mg KOH/g	16.9	20.7	14.3	14.8

Oxidative Stability - Rotating Pressure Vessel Oxidation Test (RPVOT)



Can We Do Better?



- Can We Add 5% or 10% Sustainable Base Oils to Our Formulations?
- Can We Design More Sustainable Formulations?
- Can We Produce More Sustainably?
- Can We Consume Less Energy?
- Can We Create Longer Lasting Products?
- Can We Use More Sustainable Packaging?