

Lubricants

BIOREFINING PROCESS SOURCE

Lubricants can be made from **bio-derived liquefaction oil** (from **thermochemical liquefaction**), **glycerin** (from **esterification/transesterification**) and from **soybeans** (from ozonolysis and similar chemical reactions)

DESCRIPTION

Bio-based oils can be transformed into industrial lubricants that perform on par with their petroleum-derived relatives.

PRICE

\$20/gallon¹

MARKET SIZE

\$3.1 billion²

REFERENCES

¹ Product detail, SoyClean Penetrant Lubricant.

<http://soyclean.biz/shopping/productsdetail.asp?cat=PL>. (2004 Apr 9).

² Industrial Lubricants - Market Size, Market Share, Demand Forecast, Sales, Company Profiles, Market Research, Industry Trends. 2000 Dec, <http://www.freedoniagroup.com/Industrial-Lubricants.html>. (2004 Apr 9).

Bollea, Dennis, et al. Manufacturing Ultraclean Lubricants. 2003 April.

<http://www.a2c2.com/articles/ls0403.asp?pid=352&articleText=ls0403>. (2004 Apr 9).