

TECH NOTE

ISO 9001:2008
ISO 14001

What Does “Biodegradable Lubricant” Really Mean?

It's the ability of a substance such as a lubricant of being broken down or decomposed by the action of microorganisms such as bacteria that lives in the ground and/or on surface water in the event of an oil spill or leak. That being said almost every substance is biodegradable to some extent.

However in recent years there have been regulations and standards established within the lubricants/chemical industry to prevent toxicity and contamination from harming the environment. The Organization for Economic Cooperation and Development (OECD) has developed test guidelines for determining the biodegradability of a product: OECD 301B. The result is shown in percentage of biodegradability within 28 days for a substance when it is exposed to certain micro organisms. Whether the contact is accidental or incidental, traditionally there are 2 main terms/categories to classify the product's biodegradability;

A) Readily Biodegradable

- Is when a product is able to biodegrade to its natural state after being subject to sunlight, water and/or microbial activity to a percentage of no less than 60% within 28 days.
- Readily Biodegradable lubricants utilize a vegetable or canola base oil and are blended with synthetic esters enabling them to pass the “60 day test.”

B) Inherently Biodegradable

- Is when a product is able to biodegrade to its natural state after being subject to sunlight, water and/or microbial activity to a percentage of as low as 20-60% within 28 days.
- Inherently Biodegradable lubricants are most commonly used in sensitive areas requiring a “passing grade” on aquatic animal tests. This means Inherently Biodegradable lubricants use additive chemistry containing no heavy metals or zinc while being made with a synthetic or highly refined base oil like a polyolester base.



Rate of Biodegradable Activity	%	Days
Readily Biodegradable	60-100	28
Inherently Biodegradable	20-60	28

Hopefully we have somewhat demystified Biodegradable Lubricant Terminology as it is key when selecting a lubricant based on specific environmental needs!