



TECHNICAL DATA

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529 Ecoshield™ Biodegradable Grease NLGI #2

Ecoshield™ Biodegradable Grease NLGI #2 is a multi-purpose, extreme pressure, environmentally friendly, non-toxic, water resistant, readily biodegradable, bentone base grease that is formulated for use in the lubrication of those ball, roller, sliding and journal bearing and wire rope applications found in marine, agriculture, forestry, mining and construction equipment that is operated in environmentally sensitive areas. Ecoshield™ Biodegradable Grease NLGI #2 meets the U.S. EPA's 2013 Vessel General Permit (VGP) specifications and requirements for Environmentally Acceptable Lubricants (EAL) for marine applications where the lubricant may come into contact or interface with fresh or sea water.

Ecoshield™ Biodegradable Grease NLGI #2 is compounded from a combination of renewable, high oleic plant base oils and biodegradable synthetic polyol ester base fluids,, a bentone thickener and select additives. This formulation provides Ecoshield™ Biodegradable Grease NLGI #2 with the following performance features:

1. Very good pumpability characteristics for use in centralized lubrication systems
2. Very good resistance to water washout
3. Excellent shear and mechanical stability
4. Superior anti-wear and extreme pressure protection
5. Very good load carrying capabilities
6. Formation of a durable lubrication film with a good resistance to water and variation of temperature resulting in reduction of maintenance and down-time costs
7. Very good resistance to water washout
8. Excellent rust and corrosion inhibiting characteristics
9. Very good resistance to oxidation and oil separation
10. Very good adhesive properties
11. A very high dropping point

Applications

Ecoshield™ Biodegradable Grease NLGI #2 is recommended for use in the following applications:

- Marine vessel applications:
 - Rudder assemblies that are below the water line.
 - Any thrusters below the water line that are subject to the VGP.
 - Any other apparatus subject to the current VGP
 - Vessel deck or other grease applications
- Marine applications and dam applications for lubrication and protection on slide rails, metal cables, wire ropes, winches and chains
- Industrial applications including general machinery bearings
- Wastewater treatment facilities
- Farm, forestry and construction applications operated in environmentally sensitive areas.

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Typical Properties

NLGI Grade	2
Thickener Type	Bentone
Color	Tan
Worked Penetration 60 strokes (ASTM D-217)	265 – 295
Dropping Point °F/°C ASTM D-566	None
Four Ball EP (ASTM D-2596)	
Weld Point, kg	315
Four Ball Wear (ASTM D-2266)	
Scar diameter, mm	0.55
Water Washout (ASTM D-1264)	
% loss @ 175°F (79°C)	8.82%
Water Spray-Off ASTM D-4049	17.2%
Biodegradability OCED 301-B	82%
Base Oil Viscosity @ 40°C, cSt ASTM D-445	121.22