



AR8300 Severe Duty Biodegradable Synthetic Grease

DESCRIPTION: COMPLEX NANOCERAMIC RESTORITIVE TECHNOLOGY

AR8300 is the culmination of 10 years of extensive research and development. It contains an array of complex minerals, each chosen for their unique characteristics when reduced to nanometers in size. The base oil is the highest quality PAO Durasyn 148 selected for its extreme temperature capabilities.

AR8300 actively restores worn surfaces in areas where friction is present. The minerals interact with each other and the host metal creating a chemical reaction for the bonding and reconstructive process, resulting in a surface with a friction coefficient of 0.003 and 5 times stronger than the host metal. **AR8300** remains active on the surface under heavy loads rated at 1,813,000 PSI. This is a tribological breakthrough.

AR8300 is for use in extreme environments such as heavy load bearings, curved rail tracks, wind turbines, or wherever the present grease is over-challenged or exceptional lubrication and performance properties are desirable. Greasing intervals may be extended up to 3- 6 times or more.

AR8300 forms a new surface on the host metal, which eliminates corrosion, hydrogen embrittlement and micro-pitting with no chemical reactions to the host oil's additive package.

FEATURES / BENEFITS

- Restores areas worn by friction
- Extends the life of components and bearings
- Eliminates corrosion
- Extremely low water washout at 0.05
- Forms an ionic ceramic bond to the host alloy
- Reduces heat generation
- Coefficient of Friction (COF) = 0.003
- Extreme temperature of ceramic surface withstands 3500°F
- Five times harder than the host metal
- Eliminates hydrogen embrittlement
- Restores efficiency
- Doubles the life of railroad tracks and wheels

Falex Pin & Vee Test:

Compared to a previous Nanoceramic formulation

- Decrease of COF from 0.014 to 0.003 (4.5 times)
- Increase in the linear dimensions of parts (weight gain roller test rig at 0.03 grams)
- Reduction of linear wear from $I_h=6.3 \times 10^{-8} = 2.3 \times 10^{-8}$ (3 times)
- Increase in critical loads from $p_{cr}=7.35$ MPa to $p_{cr} 14.40$ MPa (2 times)

PROPRIETARY NANO COMPOUND CHEMICAL COMPOSITION	
SiO ₂	42 %
Al ₂ O ₃	1.95 %
TiO ₂	0.11 %
Fe ₂ O ₃	3.50 %
MnO	0.09 %
MgO	38.0 %
CaO	0.30 %
Na ₂ O	0.30 %
Other	14.65 %

APPLICATIONS

Applications include domestic and fleet vehicles, heavy equipment, mining equipment, industrial, railroad, industrial gearboxes, marine, extreme environments, motorsport, hydraulic systems, heavy load equipment, generators, high performance engines, wind turbines and more.

PACKAGING

100gm
400gm
5 US Gal pails