

PROTECTING SEALS FROM ENVIRONMENTAL CONDITIONS

INDUSTRY:
Power & Utility

APPLICATION:
Wind Turbine

COMPONENT:
Contact Seal Ring

LOCATION:
Italy



BACKGROUND

Wind turbine seals play an important role in protecting critical components, such as the gear box, from contamination that can cause component failure. Without proper protection, seals are exposed to extreme conditions including salt corrosion, harsh weather, icing and extreme heat which can prematurely age the seal. A wind turbine component supplier who was aware of these issues contacted one of Nye's affiliates, to see if we could provide a lubricant that would protect the seal against environmental elements.

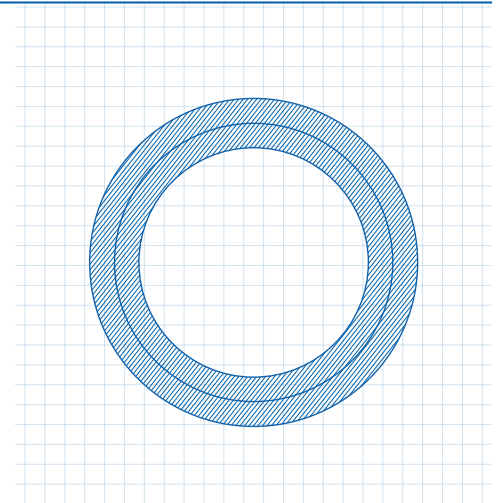
CHALLENGE

- Can the lubricant protect against extreme temperatures and environmental conditions?

SOLUTION FLUOROCARBON GEL 880

A PTFE-thickened, heavy viscosity dimethyl silicone grease.

- Great water resistance
- Wide operating temperature of -40 to 200 °C
- Seals out dirt and other corrosive environmental elements
- Compatible with plastics and elastomers



RESULTS

After testing, the customer was satisfied with Fluorocarbon Gel 880's performance and decided to use it to protect the contact seal ring around the gear box from environmental elements. Additionally, the customer decided to specify the grease for use in gear box maintenance.

Typical Properties

Base Oil Properties	Conditions	Fluorocarbon Gel 880	Test Method
Chemistry	–	Dimethyl Silicone/PTFE	–
Temperature Range	–	-40 to 200 °C	–
Kinematic Viscosity	40 °C	18407 cSt	ASTM D445
	100 °C	7349 cSt	ASTM D445
Viscosity Index	–	658	ASTM D445
Grease Properties			
Flash Point	–	350 °C	ASTM D92
Pour Point	–	-62 °C	ASTM D97
Evaporation	24 h, 121 °C	0.06%	CTM*
Density	25 °C	1.25 g/cm ³	CTM*

*CTM: Nye Company Test Method

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Nye Lubricants, Inc.

12 Howland Road
Fairhaven, MA 02719 USA
Ph: +1.508.996.6721
Email: contact@nyelubricants.com

NyeLubricants.com

