



# Lubeneotes:

*Design Engineers' Guide to Selecting a Lubricant*

## Electric Power Management Equipment

Traditional lubricants have played an important role in supporting trouble-free operation of electric power management equipment. Today's operating requirements, however, which include high temperatures, longer cycle times, and hostile environments, often demand more than traditional lubricants can deliver. Nye Lubricants meets these challenges with synthetic lubricants. Utilizing a wide variety of synthetic base oils, gellants, and additives, Nye's synthetic lubricants not only minimize friction, they can withstand broad temperatures without oxidizing, evaporating, or causing resistive failures; inhibit wear and corrosion; provide environmental sealing; and control free motion. They provide that added measure of assurance that today's electric power management equipment will operate as designed.

**Lubricants for distribution switch gear.** Lubricants for distribution switch gear, which may remain unactuated for long periods, serve a protective as well as a lubricating role. They should be oxidatively stable over time, water spray resistant, and non-migrating. High temperatures, from industrial conditions or induced by high current flow, can make wide-temperature capability equally important.

**Lubricants for sliding contacts.** Lubricants for sliding electric switch contacts are governed by the same demands imposed by straight forward mechanical sliding: good film strength, appropriate low and high-temperature fluid range, and good stay-in-place capability. Wear prevention and protection from corrosion by air pollutants are especially important in power applications.

**Lubricants for arcing contacts.** The temperatures reached in an electric arc are sufficiently high to degrade any organic molecule. Therefore, a lubricant's tendency to degrade in an innocuous manner is a definite advantage.

**Making your selection.** Following is a partial list of popular Nye greases designed for electrical power management equipment. Additional Nye greases are available to meet a wide range of application requirements. For technical specifications, evaluation samples, or questions about any Nye products — or to discuss a lubricant *custom-designed* for your application — call us at (508) 996-6721. Nye is ready to work with you to ensure you make the best possible lubricant choice.

*For the best choice in lubricants,*

*Call Nye 508-996-6721*

Lubricants for Distribution Switchgear	Temp Range (°C)	High Contact Load	Salt Water Resistance	Plastic Compatible
Rheolube 786B*	-30 to 150	●		
NyoGel 760D	-40 to 125		●	●

\*Use with caution around polycarbonate, a-b-s resins, Buna N, and other ester-vulnerable plastics and elastomers.

Lubricants for Sliding Contacts	Temp Range (°C)	Contact Force (g)	Salt Water Resistance	Plastic Compatible
Rheolube 362HT	-54to 125	50		●
Rheolube 789DM*	-40 to 150	80	●	
Rheolube 368	-40 to 125	150		●

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Lubricants for Arcing Contacts	Temp Range (°C)	Low Contact Load	Plastic Compatible
NyoGel 793*	-40 to 100	●	
Rheolube 748S	-20 to 100	●	●
NyoGel 782D*	-20 to 100	●	

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Materials for Unique Applications	Product(s)	Product(s) Characteristics
Mechanical Motion Control	Complete line of damping greases. See Nye LubeNotes, Damping Greases.	<ul style="list-style-type: none"> <li>• Reduce friction and wear</li> <li>• Quiet, smooth operation</li> <li>• Improved "feel"</li> </ul>
Connector Sealing	NyoGel 760G, a blend of synthetic hydrocarbon oils in a non-melting, water-resistant grease.	<ul style="list-style-type: none"> <li>• Water-resistant</li> <li>• Ability to "heal" punctures</li> <li>• Outstanding adhesion</li> </ul>
Wire Sealing	NyoGel 783D, a silicone-based sealing medium.	<ul style="list-style-type: none"> <li>• Wide temperature service</li> <li>• Good wetting characteristics</li> <li>• Ease of application</li> </ul>
High Voltage Cable Wrap	NyoGel 762G, vacuum-processed, fluorosilicone-based gel	<ul style="list-style-type: none"> <li>• Prevent high corona discharge</li> <li>• High dielectric/breakdown voltage</li> <li>• No moisture in material</li> </ul>
Heat Sink Compounds	Nye Thermal Coupling Compound 925, a metal-oxide, silicone-based heat transfer medium	<ul style="list-style-type: none"> <li>• Enhanced thermal properties</li> <li>• Chemical and thermal stability</li> </ul>

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