

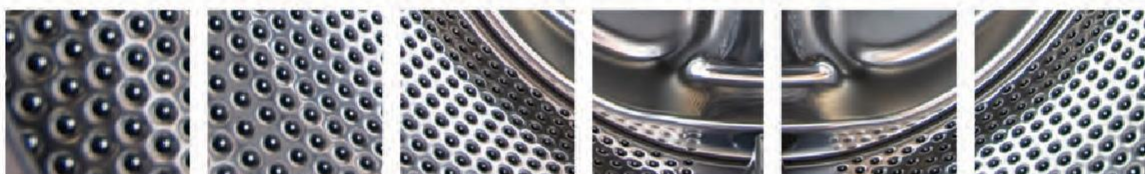
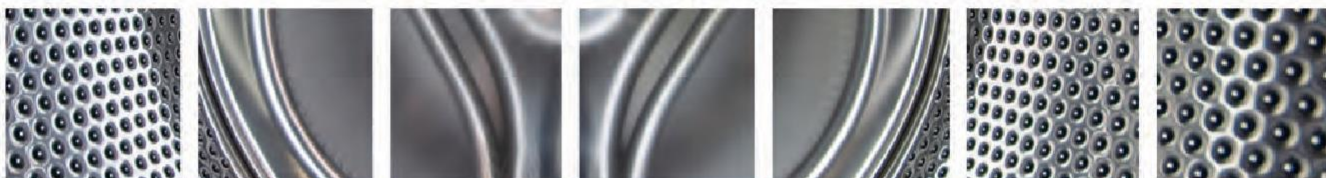


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APPLIANCE LUBRICATION

Innovative solutions for a wide range of applications
from connectors to door hinges,
from damping greases to food grade lubricants.



Innovative Solutions since 1844



Appliance Lubricants

Innovations in Household Equipment

Nye develops and manufactures a wide range of oils and greases for the appliance industry. In each piece of household equipment, several components depend upon and function with a lubrication system.

The right lubricant can greatly increase the performance and extend the life of your product. Nye manufactures products intended for lifetime lubrication, meaning the lubricant is going to last the life of the component it lubricates.

The color of the grease can be an important factor, depending on the location of the application. If the component can be seen by the end-user, most likely a clear grease will be selected. Any of Nye's lubricants can also be dyed to suit your needs.

There are many properties in a lubricant that you need to determine before making a choice, such as temperature range, viscosity, compatibility with plastics, color, chemistry, food-grade approval, etc. Nye engineers are available to help you choose the right lubricant for your application.

Pumps

Nye has a selection of lubricants for all the needs of pumps from assembly aids, sealing materials and compressor fluids. We offer a variety of viscosity grades and the availability of water soluble, water dispersible, and food grade lubricants.

Nye Products	Type	Temp Range (°C)	Benefits
Synthetic Oil 167A	PAO	-60 to 100	Low friction oil for compressor pumps
NyoGel® 730F	Polyglycol	-15 to 100	Heavy viscosity, friction reduction between plastic parts & elastomers
NyoGel® 752	Polyglycol	-30 to 100	Semi-fluid water dispersible polyglycol/silica grease for assembly aid
NyoGel® 760FG	PAO	-40 to 135	Excellent resistance to water, food grade
Fluorocarbon Gel 880-FG	Silicone	-40 to 200	High viscosity, wide temperature, low torque, excellent water resistance, food grade

Electrical Switches

Grease for sliding electric switch contacts must meet demands similar to those of other mechanical sliding surfaces: film strength, appropriate low and high temperature fluid range and stay-in-place capability. A switch grease's ability to prevent wear is also critical. Wear debris creates two problems. It can inhibit current flow when the contact is closed, increasing millivolt (mV) drop. When the contact is open, conductive wear debris can cause open circuit resistance (OCR) problems. In either case, switch performance is compromised. When selecting a switch grease, note that the viscosity of the base oil should complement the contact force of the switch. Low current/low contact force applications require lighter base oils. High current/high contact force applications benefit from more viscous base oils.

Nye Products	Type	Temperature Range (°C)	Benefits
Rheolube™ 362HT	PAO	-54 to 125	Rust inhibited Plastic compatible
Rheolube™716 HT	Polyolester	-54 to 175	Withstand extended high temperature exposure Fortified to reduce noise and wear
Uniflor™ 8511	PFPE	-50 to 225	High Temperature Excellent thermo-oxidative stability Resistance to contact with soap & detergent

Food-Grade Applications

Nye's synthetic food-grade lubricants have been approved and registered by the National Sanitation Foundation (NSF) for use in and around food processing areas. They meet the Nonfood Compound H-1 guidelines for incidental food contact. All raw materials in these lubricants conform to Food and Drug Administration (FDA) CFR Title 21. They are non toxic, odorless, colorless, and tasteless.

Nye Products	Type	Temperature Range (°C)	Benefits
PG-44A-FG	Polybutene	20 to 120	Extreme heavy viscosity grease for mechanical damping
NyoGel® 670F	PAO	-35 to 120	Medium viscosity grease for mechanical devices, good low temp performance
Fluorocarbon Gel 800	Ester	-35 to 150	Medium viscosity, EP fortified, rust inhibited, low torque, wear reduction
UniFlor™ 8512-FG	PFPE	-50 to 225	Wide temperature medium viscosity grease, chemically inert
Fluorocarbon Gel 880-FG	Silicone	-40 to 200	High viscosity, damping grease, good for wear performance
UniFlor™ 8931	PFPE	-70 to 250	Low torque, wide temperature capability, chemically inert



Adding Value and Performance to your application

Connectors

Nye's connector lubricants can be divided into two general classes: lubricants for noble and non-noble metal contacts and connector assemblies. For noble metals, fluoroethers (PFPE) are the lubricants of choice. They withstand extreme temperatures, resist aggressive chemicals and solvents and protect the plated surface during initial mating and future mating cycles of the connector. For non-noble connectors, synthetic hydrocarbons provide excellent film strength, broad temperature serviceability, and protection against fretting corrosion.

Nye Products	Type	Temperature Range (°C)	Benefits
NyeTact® 502J-20-UV	PAO Dispersion	-40 to 120	Dispersion suitable for dip, brush and spray application methods
NyoGel® 760G	PAO	-40 to 135	Clear grease, good water resistance
RheoTemp® 761G	PAO/Alkylated Naphthalene	-40 to 175	High temperature performance, insertion force reduction, copper deactivator
Uniflor™ 8511	PFPE	-50 to 225	High temperature, excellent thermo-oxidative stability, resistance to any soap, bleach & detergent
Uniflor™ 8917	PFPE	-70 to 225	High temperature, excellent insertion force reduction, long term contact protection

Hinges and Handles

Lubricants and more specifically damping greases are used on hinges and handles to control motion, noise and "feel". Most grease is used to lower resistance. The measured stiffness of damping grease increases resistance and is used to "smooth out" motion and bring a quality feel to plastic-on-plastic parts.

Nye Products	Type	Temperature Range (°C)	Color	Benefits
Rheolube™363HT	PAO	-50 to 125	Tan	Rust inhibited Good general purpose grease
NyoGel® 774 Series	PAO	-30 to 120	Clear or dyed	Great for damping applications Reduce noise and vibration
Fluorocarbon Gel 868 Series	PAO	-40 to 125	White	Wide range of viscosities Minimal change in damping characteristics with temperature
Uniflor™ 8512	PFPE	-50 to 225	White	High temperature Resist harsh chemicals, bleach and detergent

Seals

Lubricants on seals can be applied for two reasons; leakage prevention or assembly aid during manufacture. Heavy viscosity silicone greases are recommended for reducing leakage. They exhibit excellent water resistance.

Nye Products	Type	Temperature Range (°C)	Water Washout (ASTM D-1264)	Benefits
NyeFilm® 501F	PTFE Dryfilm	-40 to 250*	N/A	Assembly aid lubricant, water soluble & environmentally friendly, insertion force reduction
Fluorocarbon Gel 835C	Dimethyl Silicone	0 to 200	0.50% (60 min @ 40°C)	Very heavy viscosity, excellent oxidative and thermal stability
Fluorocarbon Gel 880	Dimethyl Silicone	-40 to 200	0.25% (60 min @ 80°C)	Excellent water resistance, wide temperature range
Uniflor™ 8521	PFPE	-45 to 225	0.12% (60 min @ 80°C)	Detergent, soap & bleach resistance Excellent plastic and elastomer compatibility

* For dried film only

Bearings

Nye offers a wide range of bearing lubrication solutions, from impregnating oils for sintered bearings to ultrafiltered greases for rolling element bearings. Nye impregnating oils are designed to promote film formation, to counteract the otherwise lubricant starved, mixed film and boundary conditions which are common with porous metal bearings.

Greases lubricate rolling bearings by bleeding a small amount of oil out of the "reservoir" of the grease thickener and into the raceway. The oil provides the elastohydrodynamic lubricating film needed to reduce friction and wear. Greases can also serve as effective seals to protect bearings from contaminants and moisture.

Nye Products	Type	Temperature Range (°C)	Four-Ball Wear Scar (ASTM D-2266)	Applications
Synthetic Oil 181B	PAO	-40 to 125	0.63 mm (600 RPM, 40 kg, 25°C)	Plastic compatible, light viscosity oil for sintered bearings
Rheolube™ 374C	PAO	-40 to 150	0.66 mm (1200 RPM, 40 kg, 75°C)	Light load, high speed bearings
Rheolube™ 716A	Polyolester	-54 to 150	0.67 mm (1200 RPM, 40 kg, 75°C)	Low torque, instrument and small motor
UniFlor™ 8771	PFPE	-50 to 250	0.56 mm (1200 RPM, 20 kg, 25°C)	Wide temperature bearings in extreme environments

Gear Motors and Gear Boxes

Utilizing various synthetic base oils and gellants, Nye's lubricants not only minimize friction but can inhibit wear and corrosion, dampen noise and control free motion. They can meet broad temperature requirements without oxidizing or evaporating. And they can provide manufacturers of today's appliances with an "edge" that will increase the performance and life of their products.

Nye Products	Type	Temp. Range (°C)	NLGI Grade (ASTM D-217)	Benefits
Rheolube™ 368AX-1	PAO	-20 to 125	2	Rust inhibited, tackifier, EP fortified Intended for highly loaded gear applications
NyoGel® 792D	PAO	-30 to 125	00 - 000	EP fortified grease intended for gear trains, gear motors and worm and planetary gears
UniFlor™ 8531	PFPE	-40 to 225	2	Wide temperature capability, excellent plastic and elastomer compatibility, resistance to aggressive chemicals

Slides and Rails

With the variety of synthetic oils, functional fluids, gellants, gelation processes and additives now available, lubricants can be formulated to minimize friction; inhibit wear, rust, and corrosion; stay in place; enhance lubricity; dampen noise; control free motion; meet broad temperature requirements without oxidizing or evaporating — or any combination of these qualities.

Nye Products	Type	Temp. Range (°C)	Four-Ball Wear Scar (ASTM D-2266)	Benefits
Rheolube™ 363HF	PAO	-50 to 125	0.65 mm (1200 RPM, 40 kg, 75°C)	Fortified with PTFE to reduce friction, rust inhibited
Rheolube™ 723GR	PAO	-40 to 125	0.65 mm (600 RPM, 40 kg, 25°C)	Rust inhibited and fortified for enhanced film strength
NyoGel® 744F-MS	PAO	-40 to 125	0.71 mm (1200 RPM, 40 kg, 75°C)	EP & PTFE fortified, rust inhibited, good water resistance

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ISO 9001:2008
ISO 14001:2004
ISO/TS-16949:2009