

When Do I Use:

Lithium Grease?
Lithium Grease Infused
with DeoxIT® Dx100L?
Particles in Grease?



Overview - Lubricating Greases

Grease is used to lubricate moving parts, usually where metal rubs against metal. It's made to be thick so that it will stay put in places where it would be difficult to keep thinner oil next to moving parts or where oil could leak out, as in automotive wheel bearings and ball joints. Grease is also applied to surfaces to add an extra barrier to protect from severe environments and weathering.

Grease has two main ingredients - -

- 1. A lubricant that combats friction
- 2. A thickener, which gives the grease the consistency that will hold it in place next to moving parts.

Over the years grease has become a staple of the engineers toolkit and has found a number of different uses. However primarily it is a form of lubricant specifically designed for parts that need infrequent lubrication or where oil would not stay in place e.g. rolling element bearings. Grease is made up of a number of constituent parts, one of which is oil which can typically make up 90% of the formulation. It is the oil in the formulation that actually does the lubricating. However oil poured into a bearing would very quickly find its way back out of the bearing! Therefore the oil needs a carrier of some kind to keep it in place and release it slowly into the parts to be lubricated. This, in essence, is the role of a grease.

In simple terms, the oil is the part that carries the main dynamic lubricating responsibility, the thickener determines the physical characteristics of the product while additives enhance the operating properties of the grease. Lithium is a type of thickener so we will concentrate on that area here. A thickener not only provides structure to hold the oil in place, it also acts as a 'sponge' releasing small amounts of oil during operation. There are several different types of thickener depending on the application. Extremes of temperature, moisture or speed may all require different types of thickeners. However for many applications that are deemed non-extreme or general purpose in nature, Lithium is a popular choice and has good all-round properties. The majority of greases, especially those used in general or multi-purpose applications will use Lithium as a thickener.

WHY DeoxIT® L260 Grease?

CAIG's DeoxIT® L260 Grease is a lithium grease with unique additives to enable it to adhere and stay on the surfaces it is applied to. It has a tenacity to stick to surfaces. Additional additives allow it to displace moisture, prevent oxidation and corrosion and provides superior lubrication and protection. DeoxIT® L260 Grease's unique properties allow it not only to be used on mechanical devices - also electrical devices and equipment; such as high powered switches, disconnects, connectors, relays and exposed connections in severe environments.

SB-WDGP-18, 3/2022

LABORATORIES, INC.

Home of the DeoxIT® family of Environmentally-Safer Contact Cleaners and Connector Enhancing Treatments Made in USA



WHY the NEW DeoxIT® L260D Grease?

Up until now, greases were formulated to lubricate, prevent corrosion and protect the surfaces.

What if there is corrosion on the metal surfaces?

Whether you have a mechanical or electrical device that just needs lubrication, or has minor or major amounts of corrosion, wouldn't you want to take care of both issues at the same time?

DeoxIT® L260D Greases take care of both concerns. The lithium grease is the same grease as the L260, providing great lubrication and protection; however, it is also infused with a version of our DeoxIT® D-Series fluid, the Dx100L fluid. Refer to Tech Info Guide TB-DG260-17, for additional information, (#1, http://caig.com/technical-information/).

Simply, the DeoxIT® L260D, provides the same attributes as the L260, and also has the unique ability to lift off the oxidation and corrosion from the metal surfaces without harm to the surfaces. Unlike other aggressive corrosion removing chemicals, that remove layers of metal, possibly changing design specifications, DeoxIT® L260D is very gentle to the surfaces and works slowly to lift off the contaminants. It keeps working until most if not all of the oxidation is lifted from the surface. The mechanical action of the device then displaces the contaminants away from the metal-to-metal connection. The same advantages work for mechanical devices, as well as electrical devices.

When you first apply the L260D Grease, the DeoxIT® fluid moleculary bonds to the metal, sealing and lubricating the metal surfaces, so even when the grease eventually separates from the surfaces, the DeoxIT® Dx100L fluid is still protecting the surfaces. DeoxIT® Grease L260D keeps working when other greases stop!

WHY Include Particles in Grease?

There are times when greases need additional additives to help with displacing severe oxidation, corrosion or need additional lubrication, heat dissipation or protection. The following are the additives/particles available and their benefits.

DeoxIT® Type L260

DeoxIT® Type L260Np, No particles
DeoxIT® Type L260Cp, Copper particles
DeoxIT® Type L260Ap, Aluminum particles
DeoxIT® Type L260Qp, Quartz particles
DeoxIT® Type L260Gp, Graphite particles
DeoxIT® Type L260GQp, Graphite & Quartz
DeoxIT® Type L260Tp, Teflon

DeoxIT® Type L260D

DeoxIT® Type L260DNp, No particles
DeoxIT® Type L260DCp, Copper particles
DeoxIT® Type L260DAp, Aluminum particles
DeoxIT® Type L260DQp, Quartz particles
DeoxIT® Type L260DGp, Graphite particles
DeoxIT® Type L260DGQp, Graphite & Quartz
DeoxIT® Type L260DTp, Teflon

No particles: Maximum lubrication for relatively clean surfaces.

Copper particles: Copper particles assist in breaking up oxidation and corrosion. Copper is conductive.

Aluminum particles: Use when aluminum metals are involved. Use in areas that two contacts will not touch and possibly short. Aluminum is conductive.

Quartz particles: Quartz particles assist in breaking up oxidation and corrosion. Quartz is <u>nonconductive</u>.

Graphite particles: Graphite particles assist in heat stability and lubrication. Graphite is excellent for heat transfer.

Graphite and Quartz particles: Use when heat transfer, lubrication and assistance is needed in breaking up oxides and corrosion.

Teflon: For superior lubrication and protection of parts.

Custom formulation:

Contact CAIG Team Member at info@caig.com





12200 Thatcher Court, Poway, CA 92064 U.S.A. **P:** 858/486-8388 **E:** info@caig.com **WEB:** www.caig.com **www.deoxit.com**

























Audio/Video

Computers

Automotive Communications

Marine

Electrical

Energy

Photography

Security

Medical



DeoxIT® Grease L260 Sizes:

- **У** Squeeze Tubes (sample/kit size), 2 grams
- **Small Jar**, 28 grams
- **Squeeze Tube**, 226 grams
- **Caulking Tube,** 226 grams
- **Small Pail**, 3.6 Kg
- **Pail**, 15.9 Kg



Need Help Selecting DeoxIT® Products?

Visit our site for an interactive **Selection Guides:**

- + Manufacturing
- + Assembly/Install
- + Service/Maintenance
- + Special/Unique applications

Visit: http://caig.com/help-learn/

Mechanical Applications:

Bearings (all types), Doors (closures), Drives (chain/sprockets), Slide bushings, Hatch closures, O-rings and seals, Linear motion systems, Plugs (threaded holes),

Rack & pinion assemblies, Screw devices (jacks, rails), Sliding parts, Tracks/quides/rails, Threaded closures,

Worm gears, etc.

Electrical Applications:

Antenna connections, Battery terminals, Buss bars, conductors, Commutators, Conductor rails, Contactors, **Drying & processing** equipment,

Disconnects, High amperage/high voltage applications, **Industrial** equipment (lifts, cranes, robotics, etc.), Power tools, relays & switches (heavy duty, knife, step, rotary), etc.

COMPARISON CHART

Product	Heat Resistance	Wear Resistance	Water Resistance	Oxidation Resistance*	Oxidation Dissolving
DeoxIT® M260	Excellent	Very Good	Good	Very Good	Good
DeoxIT® L260	Very Good	Very Good	Very Good	Very Good	Good
DeoxIT® L260D	Excellent	Very Good	Excellent	Excellent	Very Good
Lithium	Good	Good	Good	Fair	Poor
Lithium Complex	Very Good	Good	Excellent	Fair	Poor
Complex	Very Good	Good	Excellent	Fair	Poor
Bentone Clay	Very Good	Very Good	Good	Good	Poor
Polyurea	Very Good	Good	Excellent	Good	Poor
Polyrex™	Excellent	Very Good	Good	Good	Poor

^{*} Oxidation of lubricants can produce sludge, varnish, gum and acid.

Service Bulletin SB-WDGP-18, 3/2022



CAIG Laboratories, Inc.

12200 Thatcher Court, Poway, CA 92064 U.S.A.

P: 858/486-8388 | **E:** info@caig.com **WEB:** www.caig.com | www.deoxit.com



[™] Polyrex is a trademark of Exxon/Mobil Corporation