



Grease

Overview

We offer a full compliment of lubricants including our low vapor pressure greases for clean room and vacuum applications. The TriGel line is specifically formulated to offer a lubrication solution for a wide range of linear motion applications. Choose the appropriate gel for your requirements and get the utmost performance out of your Thomson lead screws.



Lubrication Selection Chart for Ball & Lead Screw Assemblies

BSA Gel Type	TriGel-300S	TriGel-450R	TriGel-600SM	TriGel-1200SC	TriGel-1800RC
Application	Acme Screws, Supernuts, Plastic Nuts	Ball Screws, Linear Bearings	Bronze Nuts	Acme Plastic Nuts, Clean Room, High Vacuum	Ball Screws, Linear Bearings, Bronze Nuts, Clean Room, Vacuum
Maximum Temperature	200°C (392°F)	125°C (257°F)	125°C (257°F)	250°C (482°F)	125°C (257°F)
Mechanism Materials	Plastic on Plastic or Metal	Metal on Metal	Metal on Metal Bronze on Steel	Plastics or Metals, any Combination	Metal on Metal
Mechanical Load	Light	Moderate	Moderate to Heavy	Light to Moderate	Moderate
Precision Positioning	Not recommended w/o OEM testing	Not recommended w/o OEM testing	Not recommended w/o OEM testing	Usually OK	Usually OK
Very Low Torque Variation Over Temperature	Yes	-	-	Yes	-
Very Low Starting Torque	Yes	Yes	-	Yes	Yes
Compatibility w/Reactive Chemicals	Not recommended w/o OEM testing	Not recommended w/o OEM testing	Not recommended w/o OEM testing	Usually OK	Not recommended w/o OEM testing
Compatibility w/Plastics and Elastomers	May cause silicone rubber seals to swell	May cause EPDM seals to swell	May cause EPDM seals to swell	Usually OK	May cause EPDM seals to swell
Clean Room Use	Not recommended	Not recommended	Not recommended	Usually OK	Usually OK
High Vacuum use	Not recommended	Not recommended	Not recommended	Usually OK	Usually OK
Vapor Pressuer (25°C)	Varies with lot	Varies with lot	Varies with lot	8 x 10-9 torr	4 x 10-9 torr
Lubricant Price 10cc Syringe** 1 Pound Tube	Yes Yes	Yes Yes	4 oz tube	Yes No	Yes No

* Maximum temperature for continuous exposure. Higher surge temperatures may be permissible but should be validated in the actual end use by the OEM. Low temperature limits are -15 °C or lower. Consult customer support for specifics.

PTFE Coating



PTFE coating is a dry film which creates a lubrication barrier between a metal substrate and a polymer bushing or lead nut. It can in some cases eliminate the need for an additional gel type lubricant which must be re-applied. It is well suited for use with our SuperNut line of plastic nuts and stainless steel lead screws. Lubrication maintenance intervals can be eliminated and the coating does not attract particulate like a gel lubricant. Gel lubricants can provide lower friction coefficients than dry film lubricants but must be maintained to prevent performance degradation. PTFE coating provides an attractive and clean* alternative to gels and oils.

Typical Properties

Type:	Bonded Solid Film Lubricant
Purpose:	Increased Lubricity, Decreased Friction & Wear
Appearance:	Black Coating
Thickness:	Approx. 13 – 25 micron
Active Lubricant:	Polytetrafluoroethylene
Friction Coefficient:	0.06 to 0.12
Temperature Operating Range:	-250° to 290° C
Resistance to Acids:	Excellent
Resistance to Bases:	Very Good
Resistance to Solvents:	Excellent

*Some particulate will be generated as a result of wear between nut and screw. Screw may begin to show signs of "polishing" over time. This does not necessarily indicate failure.