

Anti-Seize and Lubrication Compounds



 **NEVER-SEEZ[®]**
...or Get Stuck With Something Else



Specify Never-Seez or Get Stuck With Something Else.

Never-Seez®, a prominent trademark in the Bostik family of products, has been recognized for almost five decades as the industrial leader in anti-seize and lubricating compounds.

When first introduced, the original Never-Seez anti-seize compound represented an innovative way to assemble and disassemble metal parts with ease. A new technology in mechanical engineering, Never-Seez was soon specified for major industrial and government use on parts exposed to heat, pressure and corrosion.

Never-Seez contains very fine metallic particles in a special hydrocarbon carrier which seals and protects metal parts under the most extreme conditions of heat, pressure, and contamination. The fine, protective film of Never-Seez cannot be burned off or completely removed by abrasion. Never-Seez cannot be washed off by fresh or salt water. The protective coating will remain, even after extended exposure to the elements. Application of Never-Seez insures trouble-free protection against seizure, corrosion, pitting, and galling of metal parts.

Disassembly of machinery, piping and metal parts are extremely difficult. Both driven and static parts of mechanical equipment are subject to seizure. Seizure can be caused by many factors: thread distortion caused by heat with subsequent expansion and contraction of metals; incorrect tolerances in press, tapered and shrink fits; effects of exposure causing corrosion; galvanic action because of adjacent dissimilar metals; and carbon deposits in internal combustion applications. Never-Seez helps to eliminate these issues.

The costly expense of down-time, maintenance, repair or replacement of parts can be greatly reduced by using Never-Seez; through nondestructive disassembly and bolt reuse. Surface coverage up to 6,480 sq. in. coverage per pound based on film thickness of 4 mils.

Never-Seez Compounds

Bostik Never-Seez compounds are carefully formulated using a carrier developed to exacting specifications. Never-Seez provides users with unusual cohesiveness and spreadability features to provide extraordinary surface protection. It has a great affinity for metal surfaces and resists displacement under the most adverse environmental conditions.

Features:	Benefits:
Protects from seizure at high temperatures	Bolts, flanges and other parts are removed in less time without damage.
Resists galvanic action	Dissimilar metals do not react at contact interface and allow smooth operation.
Prevents galling	Prevents damage at assembly lowering scrap cost; speeds disassembly.
Protects against rust and corrosion	Parts do not corrode, extending service life and non-destructive disassembly.

Torque Reduction Value

How Never-Seez Affects Torque and Clamping Force

Compared to unlubricated fasteners*, the use of Never-Seez in an application can offer or be viewed in two ways:

- 1. SAME Clamping Force at X% reduction in specified Torque**
Never-Seez provides the SAME clamping force when applying up to X% LESS torque.
- 2. X% MORE Clamping Force at specified Torque**
Never-Seez will provide X% MORE clamping force when applying the specified torque.

*The percentage (X%) variable depends on which Never-Seez product is selected for the job. In order to best represent typical torque reduction value, Bostik engineers reference a "K-Factor" for unlubricated carbon steel fasteners of 0.185. By dividing the selected Never-Seez product "Torque Coefficient, K-factor" by this base line of 0.185 will provide the Never-Seez product X% difference in torque value. Each Never-Seez formula offers unique performance features engineered for its targeted applications. Refer to product information sheets at www.bostik-us.com.

GENERAL THREAD APPLICATION CONSIDERATIONS

When Never-Seez is properly applied, assembled bolt can be reinstalled, reducing replacement costs and maintenance down time.



1 Apply liberally to base of bolt threads – full circumference. There is no need to coat the full length of threads, eliminating product waste.



2 Screw the nut on bolt all the way up shaft, then unthread off. This will fill in the anti-seize evenly between the bolt threads thus ensuring proper coverage for effective lubrication.



3 Apply under the bolt head (full circumference) before installing.

Critical Note: The area under the bolt head contributes more friction than the threads. This is a commonly neglected area and can lead to destructive disassembly as a last resort.

ORIGINAL

PROTECTION

DISASSEMBLY

SAVINGS



Regular Grade

The "original" anti-seize compound and extreme pressure lubricant formulated with copper, graphite, aluminum and other ingredients to protect metal parts against corrosion and seizure. Fine metallic and graphite particles in a special grease protect parts in high heat, high pressure and corrosive environments.

Specifications; certified:

- Ford ESE-M12A4-A
- Garrett Engine Div. PCS5724
- GE D6Y28C1
- Pratt & Whitney PWA 36053-2
- BMW B340294, B340598, B340300
- Mercedes-Benz
- Daimler Chrysler 471502626

Upper Temperature Limit: 1800°F

Torque Reduction Value = 30%

Benefits:

- Resists galvanic action between dissimilar metals
- Protects against carbon fusion
- Resists alkaline solutions, most chemical and acid vapors, road salt, steam and salt water
- Prevents galling and seizure on steel to stainless steel, titanium, magnesium, and other hard metals

Industry Use:

- | | |
|-------------------------------------|---------------------------------|
| • Vehicle brakes & spark plugs | • Glass manufacturers |
| • Amusement park rides | • Kiln & heat treatment plants |
| • Conveyors, elevators & escalators | • Machine tools & rolling mills |
| • Construction sites | • General maintenance |
| • Farm & irrigation rigs | • Mining & drag lines |
| • Foundry, forging & extruder | • Power transmission |
| | • Pulp & paper |
| | • Steel & textile |



Pure Nickel Special and Nuclear Grade

Never-Seez Pure Nickel Special and Nuclear Grade are superior, high temperature, extreme pressure anti-seize compounds. They contain flake particles of pure nickel, graphite and other additives in a special grease carrier found to enhance anti-seize performance. **Both products are recommended for use when applications prohibit the presence of copper, especially when resistance is required.**

Specifications; certified:

- Ford ESE-M12A4 / Ford WSD-M13P8-A1
- Boeing BAC5008 Type 7-3
- Pratt & Whitney PWA 36053-1
- GE Engine A50-TF198 Class A
- GE D6Y28C1
- Garrett Engine Div. PCS5721
- Rolls-Royce EMS27627

While it's the same high quality product as Pure Nickel Special, **Pure Nickel Special Nuclear Grade** is specially tested and certified pure for use in nuclear power plants. Each production lot of Nuclear Grade is tested for contaminants of sulfur, halogens, and low-melt metals. Each container of Nuclear Grade is labeled with the lot and test report number to certify purity.

Specifications; certified:

- GE Nuclear Energy D50YP12 / GE D6Y6C1

Upper Temperature Limit: 2400°F

Torque Reduction Value = 15%

Benefits:

- Excellent heat dispersing qualities
- Minimizes corrosion
- Resists galvanic action between dissimilar metals
- Enables fast disassembly of parts – even after high temperature exposure
- Prevents galling on steel to stainless steel, titanium, magnesium, and other hard metals

Industry Use:

- | | |
|-------------------------------------|-----------------------------|
| • Aerospace & aircraft | • Turbine manufacturer |
| • Chemical plant | • Tire manufacturing |
| • Clay brick firing | • Vehicle oxygen sensors |
| • Petrochemical plants | • Slag blowers |
| • Power generating & Nuclear plants | • Burner nozzle clamp bolts |
| • Stainless steel assembly | |



High Temperature Stainless and Stainless Nuclear Grade

Never-Seez High Temperature Stainless is a stainless steel, graphite, aluminum based anti-seize compound formulated to protect against seizure and galling, galvanic and severe environmental corrosion. **Products were specifically designed for applications that cannot use nickel-based products.**

Never-Seez High Temperature Stainless Nuclear Grade

is the premium grade anti-seize compound developed in conjunction with Electricite de France (EDF) for use in nuclear power plants to protect nuclear components from seizure and galling. Each production lot of Nuclear Grade is tested for contaminants of sulfur, halogens and low-melt metals and each container is labeled with the lot number to certify purity.

Specification; tested to:

- GE Nuclear Energy D50YP12

Upper Temperature Limit: 2200°F

Torque Reduction Value = 13%

Benefits:

- Excellent resistance to corrosion
- Prevents seizure at high temperatures
- Resists galvanic action between dissimilar metals
- Speeds disassembly
- Prevents galling
- Resists alkaline solutions, chemical and acid vapors, steam and iodized water

Industry Use:

- | | |
|--|--------------------------------|
| • Fasteners in steel mills | • Reactor bolts |
| • Power generating & Nuclear plants | • Turbine bolts & Flange seals |
| • Stainless steel pipe fittings, flanges, pump fittings and unions | • Gauges & fittings |
| • Fasteners in exhaust manifolds | • Gland studs |
| | • Preheat chambers |

Common Applications Considerations • Chain Drives • Mounting bolts • Fasteners • Flanges • Sluice gate • Shaft keys



Black Moly

Black Moly lubricant is designed for industrial applications requiring non-destructive assembly and disassembly of components. This multi-purpose lubricant contains a high concentration of molybdenum disulfide, making it the most effective choice for extreme pressure applications – such as under heavy loads and slow speeds which can result in boundary lubrication failure. Black Moly withstands pressures to 500,000 PSI.

Upper Temperature Limit: 750°F

Torque Reduction Value = 24%

Benefits:

- Protects and lubricates metal parts in high friction, high pressure environments
- A simple coating provides smooth break-in of new and rebuilt equipment

Industry Use:

- Engine assembly & break-in
- Press fit assemblies
- Railroad applications
- Machine tool parts
- Highly loaded bearings <500 RPM
- Hot exhaust fans
- Adjusting screws
- Crushing mills
- Steel forming gates & slides
- Fork lifts
- Truck & Trailer
- Mining equipment
- Shovel clevis pins
- Wind mills



Blue Moly

Blue Moly is designed for applications requiring non-destructive assembly and disassembly where combinations of high loads, high temperatures and low speeds are encountered to reduce friction during the assembly of press-fit components. Blue Moly withstands pressures of 300,000 PSI. The exclusive combination of molybdenum disulfide and pure nickel flake suspended in a premium-grade grease works in a wide range of applications. Blue Moly is especially recommended for those applications in which graphite, zinc, lead, and copper are prohibited or undesirable. The addition of special corrosion inhibitors makes Blue Moly an effective choice of use in harsh environments.

Upper Temperature Limit: 1500°F

Torque Reduction Value = 19%

Benefits:

- Excellent protection against extreme pressure
- Unique blue color allows for easy visual inspection

Industry Use:

- Heavy construction equipment
- Aircraft components
- Stainless steel fasteners & slow moving parts
- Automotive engine bolts & body fasteners
- Stainless steel flange & pump bolts
- Chemical processing machinery
- Gasket dressing
- Military equipment



Mariner's Choice

Never-Seez Mariner's Choice prevents rust, galling, and galvanic corrosion in salt water, salt air, and high-moisture environments. Specially formulated for wet applications. This product was developed from years of experience working with marine engineers to provide superior parts protection in applications exposed to salt water. Mariner's Choice is the best choice for protection above and below the waterline without polluting the environment.

Upper Temperature Limit: 2450°F

Torque Reduction Value = 41%

Benefits:

- Excellent protection from salt water and fresh water
- Excellent resistance to water washout
- Inhibits galvanic corrosion
- Compatible with soft metals

Industry Use:

- Bilge piping
- Water pump gaskets & flanges
- Screw shafts
- Prop shaft bearing housings
- Winches, cables & anchor chains
- Hatch covers
- Porthole studs
- Offshore rigging
- Suspension bridges & bridge bearings
- Agricultural & farm equipment
- Car washes
- Naval ship Applications
- Boat builders & yards
- Steam traps



Pipe Compound with PTFE

Never-Seez Pipe Compound is a superior lubricating and anti-seize compound formulated to provide maximum thread lubrication in a wide range of pipe threads and fittings. The use of polytetrafluoroethylene (PTFE) and other sealant enhancing additives in Never-Seez Pipe Compound allows greater thread engagement and more positive sealing. These benefits assure more reliable sealing on “start-up” and throughout the life of the assembly. Pipe Compound also prevents corrosion and galling of threads for easy disassembly. Recommended for use on black iron, galvanized stainless steel, and high pressure steam pipes in contact with cast iron, malleable, brass, stainless steel or galvanized fittings.

Specifications: meets Federal TT-S-1732

Upper Temperature Limit: 525°F

Torque Reduction Value = 14%

Benefits:

- Prevents corrosion, galling, and seizing
- Assures easy disassembly
- Suitable for contact with water, natural and propane gas, air, steam, and hydraulic oils
- Suitable for all combinations of pipe and fittings
- Non-toxic and non-hazardous

Industry Use:

- Water lines, non-potable
- Steam pipe fittings
- Hydraulic lines & fittings
- Pneumatic systems
- Gas utility lines
- Pipe & valve assemblies

White Food Grade with PTFE

White Food Grade with polytetrafluoroethylene (PTFE) is a premium quality lubricant composed entirely of ingredients that meet FDA requirements for applications in which incidental food contact is possible. It has been NSF International Registered with a H-1 Rating for use in establishments operating under the federal Meat and Poultry Products Inspection Program. The unique dispersion of FDA approved PTFE provides additional lubricity especially when a thin film of lubricant is desirable. White Food Grade with PTFE is virtually odorless, colorless, and tasteless. It is a “multipurpose” lubricant for varied services within a food or biomedical handling plant.

Specifications: NSF H-1 Registered

Upper Temperature Limit: 475°F

Torque Reduction Value = 30%

Benefits:

- Prevents stainless steel galling
- Provides a seal against entrance of liquids in bearings
- Keeps parts working longer with less wear
- Prevents rust and corrosion
- Resists water and chemical washout

Industry Use:

- Bakeries
- Breweries
- Cosmetic packagers
- Dairy food processors
- Food restaurants
- Seafood processors
- Meat processing & packaging
- Pet food manufacturers
- Pharmaceutical production
- Blender shafts
- Kettle valves
- Chain & conveyor shafts

High Temperature Bearing Lubricant

Never-Seez High Temperature Bearing Lubricant is an exclusive combination of a specially formulated high temperature grease and lubricating enhancers that provide maximum high pressure resistance and long-lasting lubrications at temperatures. High Temperature Bearing Lubricant is recommended for ball and roller bearings, bushings, open, and sealed bearings.

Upper Temperature Limit: 1000°F

Benefits:

- Bentonite and graphite based NLGI-2 grease has no “dropping point”; it will not melt and run
- Good extreme pressure characteristics
- Contains no metallic particles

Industry Use:

- Oven wheel bearings
- Process oven bearings
- Heat treat ovens & furnaces
- Kiln ovens & casters
- Oven damper controls
- High temperature exhaust fans
- Ore carts

- Screws
- Pivot connections
- Gate & cock valves
- Pour ladles
- Hoists & Cranes
- Press fits
- Bushings



Why use Never-Seez Compounds?

1. Effective as an anti-seize compound to 2450°F and in temperatures as low as -298°F (cryogenic applications).
2. Resists water washout and salt spray exposure.
3. Since it is a stable, homogeneous mixture it will not harden, separate, or evaporate.
4. Non-corrosive and inert. Resists galvanic action between dissimilar metals, eliminates metal to metal electrolysis and pitting.
5. Functions as a sealant by reducing friction and by making tighter joints possible.
6. Protects against carbon fusion – reduces diesel and engine down-time.
7. Unusual spreadability. Very economical. Up to 6,480 sq. in. coverage per lb. based on film thickness of 4 mils.
8. Inert to most gases including propane, butane, natural gas, helium, freon and nitrogen.
9. Excellent for preventing seizure of stainless steel parts.
10. Impervious to strong alkaline solutions.
11. Very low coefficient of friction. Excellent lubricity.
12. Resists most chemical and acid vapors, road salt, steam and salt water.
13. Does not deteriorate with age when stored unopened at temperatures below 120°F (49°C).
14. Quality and performance are guaranteed for five years from the date of manufacture on unopened containers.



Bostik Hand & Tool Towels is a great revolutionary, waterless cleaning towel. Cleans Never-Seez from hands and tools in seconds with no rinsing, drying or residue.

The answer to costly mechanical maintenance

Protects parts and makes disassembly easy



Scan for Product and MSDS sheets



Made in USA

PREVENTS:

Seizure • Galling • Rust • Fretting • Pitting • Corrosion

Available Internationally.
Call Customer Service for nearest distributor:
800.726.7845

Bostik, Inc.
11320 Watertown Plank Road
Wauwatosa, WI 53226 USA
800.726.7845
bostik-us.com

A company of TOTAL

ISO 9001-2000

Bostik, Inc. with a policy of continuous improvement, reserves the right to change specifications as our technology progresses. We are not responsible for the misuse and/or misapplication of our products.

©2011 by Bostik, Inc. All rights reserved.

