TECHNICAL DATA SHEET
Anti-seize 57
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(An ISO 9001 Certified Company)
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Product Description

Anti-seize 57, an Anti-Seize Lubricant is a heavy-duty, high-temperature anti-seize thread compound applicable for heavy pressure applications. It can be used in high temperature areas up to 870°C (1600°F).

Applications:

Anti-Seize Lubricant is used to lubricate and to permit easy disassembly of assemblies exposed to high temperatures and heavy contact pressures, such as boiler and oven parts, jet engines, and industrial turbines.

Properties

Chemical Type	:	Synthetic grease
Odor	:	Petroleum
Appearance	:	Aluminium
Specific Gravity @ 25±2°C	:	1.17
Brookfield Viscosity @ 25±2°C,	:	Flow similar to peanut butter (250,000 cps)
Particle size ((mm)	:	22.5
Application	:	Anti-seize Lubricant

Directions for Use

- For best results, clean all surfaces with a cleaning solvent and allow dry.
- Apply a light coating of product to parts requiring lubrication.
- Assemble parts.
- When part is assembled, wipe away any excess compound.

Static Coefficient of Friction

The following chart shows the static coefficient of friction between controlled mating surfaces subjected to a compressive stress that approximates the bearing stress acting on fastener threads under load (60% of proof for a 3/8-16 Grade 5 steel).

Temperature	Coefficient of Friction
-40	0.04

Torque Tension

Tested on degreased 3/8x16 nuts & bolts. Data reported are the k-factors calculated from torque @ 5000 lbs tension.

Lubricity "k" Factor 0.1

Note:
Silver Grade Anti-Seize Lubricant is not a high-speed load carrying lubricant and should not be used on ball or roller bearings, or on parts where lubrication is critical.

Torque vs. Elevated Temperatures

The chart shows break and prevail torque values for plain steel 3/8-16 fasteners degreased, coated, pre-torqued to 30 ft-lbs, heat soaked at an elevated temperature for 24 hours, cooled to room temperature and disassembled. (No signs of galling or seizing were visible.)

Temperature	Torque	
	Breakaway	Prevail
-40 ^{0}C	270	6
25 ^{0}C	260	6
870 ^{0}C	130	80

Corrosion Resistance

Degreased steel specimens (3/8-16 Grade 5 bolts) were treated with an even coating of Anti-seize and assembled into test blocks of aluminum and carbon steel drilled and tapped with 3/8-16 holes. A small amount of Anti-seize was applied under the bolt heads where high bearing stresses are present. The assemblies were placed in a 95°F condensing humidity salt fog chamber for 180 hours. After conditioning, the bolts were removed and inspected visually for corrosion both in the threads and under the bolt heads. There were no visible signs of corrosion on any of the treated specimens.

The product was tested for corrosive effects on plain copper strips. There was no sign of corrosion, discoloration, pitting or etching upon completion of the test.

Wear Resistance

Extreme pressure testing indicated Anti-Seize Lubricant would resist seizure, scoring and wear under adverse pressure conditions.

The test on Anti-seize consisted of a rotating spindle loaded and held constant for a ten-minute interval. If no scoring of the test block was noted, the load was increased and the test runs.

The following chart shows the load at which failure occurred. The load at which failure occurs is then reported to be the fail load. The last acceptable load is considered to the OK load, or non weld load

Load Type	Pressure Applied
OK	40
Fail Load	52
Scar width at failure, mm	0.8
Stress value at failure, N/mm2	63

Torque, Galling and Seizing

Five (5) bolts, 3/4"-10 were pre-torqued to approximately 230 ft lbs. (based on elongation) then conditioned for three six hour cycles @ 1050 ^{0}F with retorquing after each cycle. After heating, the entire block assembly was exposed to a 20% salt solution for seven days. Break torque didn't exceed 250 ft lbs. There was no seizing of any nuts during the test. There was no galling evident on the threads of the nuts or studs.

Handling

- For safe handling the product must be handled in a manner as indicated in MSDS and in compliance with relevant local regulations.
- This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.
- Use in well ventilated areas.

Storage

- Store product in a cool, dry location in unopened containers at 25±2°C.
- Store away from sunlight and heat sources.
- The product will exhibit a shelf life of one year when store in above mentioned conditions.
- To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact our Technical Service center R&D Center.

Note

All statements, technical information and recommendations set forth herein are based on tests, which Metlok Private Limited, believes to be reliable. However, Metlok Private Limited does not guarantee their accuracy or completeness. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In no case will Metlok Private Limited be liable for direct, consequential economic or other damages.

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