Loctite® anti-seize compounds are a group of premium quality products, developed to protect metal parts from rust, corrosion, galling, and seizing. They ease assembly and disassembly of slip-fit, press-fit, and threaded joints and reduce friction and wear on critical operating equipment. Formulated for severe industrial environments, these products protect against high temperatures, heavy loads, chemicals, pounding, and vibration.

ANTI-SEIZE

C5-A® Copper Based Anti-Seize

Exclusive formula suspends copper and graphite in a high-quality grease. Protects metal parts from rust, corrosion, galling, and seizing at temperatures to 1800°F (982°C). Tested to MIL-PRF-907-E.

Silver Grade Anti-Seize

Heavy-duty, temperature-resistant, petroleum-based lubricant compound fortified with graphite and metallic flake. Inert, will not evaporate or harden in extreme cold or heat. For use in assemblies up to 1600°F (871°C).

Nickel Anti-Seize

Copper-free. Recommended for stainless steel and other metal fittings. For preventing corrosion, seizing, and galling in harsh, chemical environments, and temperatures to 2400°F (1315°C).

Heavy Duty Anti-Seize

Metal-free. Excellent lubricity. Provides outstanding lubrication to all metals including stainless steel, aluminum, and soft metals up to 2400°F (1315°C).

Moly Paste

Very low friction. Lubricates press fits, protects during break-in and under high static loads up to 750°F (400°C). Allows maximum clamping from available torque.

Marine Grade Anti-Seize

Formulated to protect assemblies exposed directly or indirectly to fresh and salt water, Marine Grade Anti-Seize works especially well in high humidity conditions. It has excellent lubricity, superior water wash-out and water spray resistance, and prevents galvanic corrosion. Protects in temperatures from -29°C to 1315°C (120°F to 2400°F). Approved by the American Bureau of Shipping.

Graphite-50 Anti-Seize

Electrically conductive, non-metallic. Temperature resistant up to 900°F (482°C). Highly electrically conductive in metal-to-metal joints.

Moly-50 Anti-Seize

General-purpose, thread lubricant. Temperature resistant to 750°F (400°C). Provides excellent lubricity. Meets the performance requirements of MIL-PRF-83483.

Zinc Anti-Seize

Protects aluminum and ferrous surfaces from seizure and corrosion up to 750°F (400°C). Tested to AA 59313.

Food Grade Anti-Seize

Prevents seizure, galling, and friction in stainless steel and other metal parts up to 750°F (400°C).

N-1000 High Purity Anti-Seize

Certified pure. Copper-based. Suitable for critical, long-term, stainless steel applications and high-nickel, alloy bolting. Recommended for protecting Class 2 and 3 power plant hardware. Temperature resistant to 1800°F (982°C).

N-5000 High Purity Anti-Seize

Nickel-based. Lubricates and protects Class 1, 2 and 3 power plant hardware. Recommended for highly corrosive environments to 2400°F (1315°C).

High Performance N-5000 High Purity Anti-Seize

Nickel-based. Maximum lubricating and anti-seize properties for Class 1, 2 and 3 power plant hardware. Temperature resistant to 2400°F (1315°C).

N-7000 High Purity Anti-Seize

Metal-free formulation provides high levels of purity and excellent lubricating properties. For Class 1, 2 and 3 power plant hardware. Temperature resistant to 2400°F (1315°C).

White Hi-Temp Anti-Seize

A general purpose non-metallic formulation that protects against high temperature seizing and galling of mated metal parts, up to 2000°F (1093°C). White in color, it has excellent lubricity and can be used on various metals such as copper, brass, cast iron, steel, and all alloys including stainless steel.

Torque guide

Proper clamp load is an essential part of any bolted assembly for trouble-free operations. Torquing either nut or bolt creates the clamp load. An anti-seize lubricant used on a bolt helps to develop greater clamp load for the same torque compared to an unlubricated bolt. An additional benefit is greater uniformity in clamp load among a series of bolts. The relationship between torque and clamp load is expressed in the following equation:

Where:

T = KFD
T = Torque (in-lb, ft-lb, N-m)
F = Clamp Load (lb, N)
D = Nominal diameter of bolt (in, ft, m)
K = Torque coefficient or nut factor, determined experimentally

K Factors: K factors are obtained on Grade 8, ½" steel bolts and grade 5 nuts by a test procedure which measures torque tension properties. Lubricant was applied to the bolt threads and both faces of the washer.

See the Properties Chart for the torque coefficient or K value for the anti-seize compounds.

Loctite believes that this data fairly represents performance to be expected. However, Loctite makes no warranty of specific performance on any individual fastener. In critical applications, it is necessary to determine K values independently.

Note: There are two "coefficients" used to express the relationship between torque and tension: torque coefficient (also called "nut factor") is the most commonly used. A different concept is the "friction coefficient," which has value 2/3 (or 67%) of the torque coefficient.

PROPERTIES CHART

PRODUCT	Item Number	Container	Temperature Resistance	Color	K Value
C5-A® Copper Based Anti-Seize	51299 51277 51001 51002 51144 51147 51005 51003 51004 51006 51007 51008 51009 51010 51011 51146	2 gm pouch 7 gm pouch 1 oz. tube 4 oz. tube 4 oz. brush-top can 8 oz. brush-top can 10 oz. brush-top can 12 oz. aerosol 13 oz. cartridge 1 lb. can 1 lb. brush-top can 2.5 lb. can 8 lb. can 25 lb. can 42 lb. pail 425 lb. drum	1800° F (982°C)	Copper	0.16
Silver Grade Anti-Seize	80209 76732 76759 76764 80206 76775	4 oz. brush-top can 8 oz. brush-top can 12 oz. aerosol 1 lb. brush-top can 1 gal. can 5 gal. pail	1600°F (871°C)	Silver	0.18
Nickel Anti-Seize	77124 51286 51102 77164 51152 77175	8 oz. brush-top can 12 oz. aerosol 1 lb. can 1 lb. brush-top can 8 lb. can 5 gal. pail	2400°F (1315°C)	Silver	0.13
Moly-50 Anti-Seize	51094	1 lb. can	750°F (400°C)	Black	0.13
Zinc Anti-Seize	39901	1 lb. can	750°F (400°C)	Grey	0.15
Graphite-50 Anti-Seize	51084	1 lb. can	900°F (482°C)	Black	0.13
Heavy Duty Anti-Seize	51609 51605 51606 51607 51608	1 oz. tube 9 oz. brush-top can 1 lb. brush-top can 2 lb. can 45 lb. pail	2400°F (1315°C)	Black	0.16
Marine Grade Anti-Seize	34395 34026	8 oz. brush-top can 16 oz. brush-top can	2400°F (1315°C)	Black	0.18
Moly Paste	51050 51048 51049 51145	12 oz. aerosol 8 oz. brush-top can 1 lb. can 15 lb. can	750°F (400°C)	Black	0.11
Food Grade Anti-Seize	51168 51170 51171	8 oz. brush-top can 2 lb. can 40 lb. pail	750°F (400°C)	White	0.13
White Hi-Temp Anti-Seize	34517 34518	8 oz. brush-top can 16 oz. brush-top can	2000°F (1093°C)	White	0.16
N-1000 Anti-Seize	51115 51116 51117	8 oz. brush-top can 1 lb. can 2 lb. can	1800°F (982°C)	Copper	0.17
N-5000 Anti-Seize	51346 51243 51269 51246 51245	1 oz. tube 8 oz. brush-top can 1 lb. brush-top can 2 lb. can 8 lb. can	2400°F (1315°C)	Silver	0.15
High Performance N-5000 Anti-Seize	51572	1 lb. brush-top can	2400°F (1315°C)	Silver	0.15
N-7000 Anti-Seize	51272 51270 51273	8 oz. brush-top can 1 lb. brush-top can 2 lb. can	2400°F (1315°C)	Silver	0.16

APPLICATION SELECTION GUIDE

PRODUCT	Maximum Anti-Seize Properties	General Purpose Anti-Seize	Extreme High Temperature Resistance (to 2000–2400°F)	High Temperature Resistance (to 1600°F–1800°F)	Extreme Chemical Resistance	For Maximum Lubricity	Electrically Conductive	For Aluminum/Soft Metals	For Stainless Steel	Copper-free Formulation	For Low Speeds, High Loads	High Purity	Metal Free	Water Applications
C5-A® Copper Based Anti-Seize	◒	●		●			◒	◒	◒					
Silver Grade Anti-Seize	◒	◒		●			◒	◒	◒					
Nickel Anti-Seize	◒		●		●		◒		◒	●				
Moly-50 Anti-Seize	○					◒			●	●	◒		●	
Zinc Anti-Seize	○						○	●	◒					
Graphite-50 Anti-Seize	○	○			◒		●	◒		●			●	
Heavy Duty Anti-Seize	●		●		◒		◒	◒	●	●			●	
Marine Grade Anti-Seize	●		●						●	●			●	●
Moly Paste	○					●			●	●	●		●	
Food Grade Anti-Seize	○							◒	●	●			●	
White High Temp Anti-Seize	◒	●	●					◒	◒	●			●	
N-1000 Anti-Seize	◒						◒		◒			●		
N-5000 Anti-Seize	◒		●		●		◒		◒	●		●		
High Performance N-5000 Anti-Seize	●		●		●	●	◒		◒	●		●		
N-7000 Anti-Seize	●		●		◒		◒		◒	●		●	●	

● Preferred Choice ◒ Good Choice ○ Acceptable Choice