

# 783



## ACR

### Description

Chesterton® 783 ACR represents the newest generation of anti-seize compound.

A proprietary blend of ultra-fine inorganic solid lubricants, 783 ACR can be used under extremely severe conditions of temperature and pressure to assist in assembly and disassembly of threaded components.

783 ACR can be used over a broad temperature range. Hardening will not occur when used between -34°C to 900°C (-30°F to 1650°F).

### Composition

Chesterton 783 ACR was formulated using unique and proprietary solid lubricants. The geometry of these particles in 783 ACR are such that they roll over each other and coat metal surfaces to prevent galling during assembly of threaded parts and mating surfaces.

Because the particles are ultra-fine, they spread evenly and fill surface profiles to prevent metal to metal contact and insure thorough coverage. Chesterton 783 ACR protects assembled parts against corrosion and presents a barrier to the corrosive effects of moisture, steam, salt water, high temperatures and corrosive chemicals. Because it separates metal parts, it retards corrosion between dissimilar metals.

Rust within thread assemblies is often the primary cause of bolt seizure. When rust forms, it expands in volume within the threads forming a mechanical lock. In addition, it destroys the bolt preventing reuse. There are two critical properties required to prevent rust; resistance to being washed away by water, and ability to protect metal surfaces from oxidation.

### Typical Physical Properties

Appearance	Light gray	
Form	Soft paste	
Specific Gravity	1.33	
Particle Size	<11 microns	
NLGI	2	
Penetration	(ASTM D 217, ISO 2137)	270
Dropping Point	(ASTM D 566, ISO 2176)	>288°C (550°F)
Temperature Range	-34°C to 900°C (-30°F to 1650°F)	
Extreme Pressure	(ASTM D 2596, DIN 51 350)	8928 kg/cm <sup>2</sup> (126,983 psi)
Weld Point	(ASTM D 2596, DIN 51 350)	>800 kgf
"K" Factor	Skidmore - Wilhelm Method	0.160
LWI	(ASTM 2596, DIN 51 350)	168.7
Water Washout	(ASTM D 1264) 79°C (175°F)	<0.13%
Copper Corrosion	(ASTM D 4048, DIN 51 811)	2A, 24 hrs. @ 100°C (212°F)
Corrosion Resistance	(ASTM B 117) 5% NaCl	>1200 hrs. @ 100 microns

783 incorporates a unique technology that provides both exceptional water resistance and long term corrosion protection. In a standard corrosion test, ASTM B-117, 783 provides 20 times longer rust protection than conventional anti-seize products. In resistance to water wash off, 783 can be considered virtually waterproof. The result is long term performance even in difficult environments such as marine, chemical plants, or metals refining.

### Suggested Uses

Bolts, screws, studs, pipe threads, press fits, pump sleeves and splines. Use in power plants, textile mills, bakeries, foundries, steel mills, boiler rooms, oil refineries, marine applications, chemical plants, automotive industry.

### Features

- No Toxic Heavy Metals
- For Extreme Pressure - up to 8928 kg/cm<sup>2</sup> (126,983 psi)
- Broad Service Temperature Range
- Ultra-Fine Particles
- Corrosion Resistant
- Waterproof

### Benefits

- Safer for workers
- Usable under most extreme conditions
- Fills in microscopic voids

### Directions

Surfaces should be free from dirt, oil, grease and all other soils. Apply liberally to threads, flanges or other mating surfaces.

### Safety

Before using product, review the Material Safety Data Sheet (MSDS) or the appropriate safety sheet for your area.

## Maximum Bolt Service Temperatures\*

General Classification	"ASTM" Symbols	"JIS" Symbols	Service Temp
Mild Steel		G3101-SS41	260° C (500°F)
Carbon Steel	A307-B	G4051-S250	420° C (788°F)
5Cr-1/2Mo	A193-B5	G4107-SNB5	600° C (1112°F)
1Cr-1/5Mo	A193-B7	G4107-SNB7	550° C (1022°F)
Cr-Mo-Va	A193-B16	G4107-SNB16	600° C (1112°F)
18Cr-8Ni	A193-B8	G4303-SUS304	800° C (1472°F)
18Cr-10Ni-Cb	A193-B8C	G4303-SUS347	800° C (1472°F)
18Cr-10Ni-Ti	A193-B8T	G4303-SUS321	800° C (1472°F)
18Cr-12Ni-2Mo	A193-B8M	G4303-SUS316	800° C (1472°F)
15Cr-25Ni-Mo-Ti-V-B	A453-660		540° C (1004°F)

**\*USE OF THREAD PASTES WILL NOT EXTEND SERVICE TEMPERATURE OF FASTENERS/BOLTS.  
CONSULT BOLTING SUPPLIER FOR PROPER TEMPERATURE AND TENSION LIMITS.**

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FORM NO. 082798

REV. 4/16