

# RULE OF THUMB - LUBRICANTS, SEALANTS & O-RINGS

By Neal Wikert

**CAUTION:** The use of proper lubricants, sealants and o’rings are critical to successful operation of equipment. Consult RMS prior to actual application.

## Lubricants

Bolt Lubricants for High Temperature machines:

1. FEL-PRO Heavy Duty Anti Seize-used to be C-102
2. Milk of Magnesia is a good choice for high temperature fasteners.
3. Anti Seize-N-5000 Nuclear Grade-Nickel based

## Sealants

Permatex “Ultra Blue” - Oil resistant RTV. Not high temperature.

Permatex Aviation Form-A-Gasket Sealant Liquid 3H-Gasket sealant, non-hardening, used on metal-to-metal joints, mainly bearing casing joints

Dow Corning 3120RTV, Red-Joint sealant for centrifugal compressors. Check temperature capability prior to use on equipment.

GE RTV60-High temp RTV. Uses a catalyst-Used on Axial Compressor horizontal splits. Can be used on LP steam turbine joints. Use of a primer is recommended for improved adhesion.

Turbo R-Joint sealant for steam Turbines horizontal joint.

Triple Boiled Linseed Oil-successfully used on steam turbine joints.

Tite-Seal-Joint sealant for steam turbines.

“Silver Seal-Some limited experience/success on high temperature horizontal joints.

Temp-Tie-Steam turbine joint sealant. Comes in string form (sealed in can).

## O-Ring Temperature limits

Description	Continuous high temp	Hardness Range (Shore A)	National Compound Prefix
Nitrile (BUNA-N)	257 deg. F.	40-90	B,C,D
Ethylene-Propylene	302 deg. F.	50-90	E
Neoprene	284 deg. F.	40-80	N
Fluorocarbon (Viton)	437 deg. F.	70-90	V
Silicone	482 deg. F.	40-80	S
Fluoro-Silicone	347 deg. F.	60-90	F
Styrene-Butadiene	212 deg. F.	40-80	Gs
Polyurethane	212 deg. F.	60-90	U
Butyl	212 deg. F.	50-70	J

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