



# 217

## COPPER SEAL SUPREME

### Premium Drill Collar Compound

- GEAR OILS
- MOTOR OILS
- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

#### PRODUCT DESCRIPTION

217 Copper Seal Supreme is a lead-free, zinc-free, copper-based premium thread compound manufactured for use in applications where environmental regulations are a concern. It handles a wide range of temperatures and conditions and is wash-out resistant. 217 Copper Seal Supreme offers oxidation and H<sub>2</sub>S inhibitors as well as an extreme pressure package. Recommended for use on all rotary shouldered connections, 217 Copper Seal Supreme is used in all drilling and anti-seize applications in the petroleum industry including refineries, petrochemical plants, and the water well industry. In addition to protection against galling and seizing 217 Copper Seal Supreme protects against damage to threads on drill collars and tool joints, even under the most demanding conditions, including the deepest, hottest wells. The need for wire brushing of threads to remove buildup often experienced with compounds which contain lead or zinc is eliminated with the use of 217 Copper Seal Supreme.

#### BENEFITS

- Provides a tough protective coating
- Offers oxidation and H<sub>2</sub>S inhibitors
- Prevents galling & seizing
- High temperature performance
- Lead and zinc-free
- Consistent makeup
- Will not buildup in thread roots
- Seals tubing and casing joints
- Excellent drill pipe and drill collar compound
- Increases tool joint thread life

#### APPLICATION

217 Copper Seal Supreme is recommended for drill collars, drill pipe, tool joints, casing, tubing, line pipe, rotary-shouldered connections, and fishing tools. 217 Copper Seal Supreme is also recommended for application to stainless steel connections as well as threaded and flanged connections in steam injection, primary recovery, and fire flood wells.

#### TYPICAL OBSERVATIONS

Color	Copper
Texture	Smooth
Density, lb/gal@ 77°F (25°C)	10.25
Specific Gravity @ 77°F (25°C)	1.23
Dropping Point, ASTM D-2265	500°F (260°C)
Flash Point, ASTM D-92	>400°F (>204°C)
Penetration, ASTM D-217 @ 77°F (25°C)	305–335
NLGI Grade	1
Base Oil Viscosity	
cSt @ 40°C (104°C)	360
cSt @ 100°C (212°F)	21
Evaporation Loss,	
ASTM D-972 @ 210°F (98°C)	0.2%
Oil Separation, ASTM D-1742 @ 77°F (25°C)	Nil
4-Ball, Weld Point, Kgf (ASTM D-2596)	620 Typical
Temperature Range	10°F to 500°F (-12°C to 260°C)
Friction Factor, API RP 5A3 Annex I	1.1
Brushable To	15°F (-9°C)
Shelf Life (unopened container)	Four years

#### RELATED PRODUCTS

- 220 Copper Seal Premium Tool Joint and Drill Collar Compound
- 221 Copper Seal II Premium Drill Collar Compound—Zinc and Lead-Free Copper Compound

