



# Super S® CS EP2 Synthetic Grease

**Super S® CS EP2 Synthetic Grease** is formulated with advanced calcium sulfonate thickener technology to provide excellent extreme pressure (EP) load carrying and rust protection in moderate to severe service applications. Compared to conventional soap-base thickeners (i.e. lithium, aluminum, calcium soaps), the calcium sulfonate thickener used in Super S® calcium sulfonate grease excels in water saturated environments, providing rust protection between long re-lubrication intervals. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion.

**Super S® CS EP2 Synthetic Grease** is particularly well suited to meet the demanding lubrication requirements of steel mill and paper machine equipment. It provides a balanced combination of water washout and water spray-off resistance, as well as excellent corrosion protection, in these severely wet environments. The calcium sulfonate thickeners used are also able to maintain their consistency and EP protection characteristics even with high levels of water contamination.

**Super S® CS EP2 Synthetic Greases** possess excellent mechanical stability under vibrating conditions making them extremely effective as wheel bearing grease in medium to high speed service conditions. The excellent load carrying capacity and high temperature stability found in calcium sulfonate grease allow it to also be used in disc brakes, universal joints, fifth wheels, pulp and paper, steel mills/rolling, and many other applications requiring a high performance, heavy-duty, multi-purpose grease. The excellent water washout properties make it very well suited for use in marine applications due to it being less toxic than Lithium thickened grease. An excellent reputation for reliability, consistency, and its ability to handle tough applications, **Super S® CS EP2** is one of the best multi-purpose solid lubricants available.

## RECOMMENDATIONS/SPECIFICATIONS

Meets requirements of NLGI GC-LB  
DIN 51825

## SPECIAL HANDLING, NOTICES OR WARNINGS

Use the same care and handling as for any petroleum product.

## FEATURES/ BENEFITS

**Super S® CS EP2 Synthetic Grease** is formulated with high VI base stocks, performance additives and synthetic thickener to provide

- Excellent water resistance in fresh and salt water environments
- Incredible corrosion resistance
- Calcium sulphonate thickener provides a high TBN offering incredible oxidation stability
- Outstanding anti wear and EP protection over an extended re-lubrication period for equipment protection under heavy and shock loading
- Exceptional shear stability
- Excellent high temperature oil bleed control
- Reliable bearing lubrication for operations up to 232 C (450 F) with proper re-greasing intervals
- An advanced polymer additive package which resists water washout
- Ability to absorb free water, without losing thickener consistency
- Extended re-grease intervals, reducing grease consumption

## APPLICATIONS

**Super S® CS EP2 Synthetic Grease** has shown excellent performance in:

- High temperature applications
- Marine applications
- Resistant to water wash out and water spray off
- On and off road heavy duty equipment
- Applications with wide temperature ranges
- Applications seeking longer life between servicing
- Disc brake wheel bearing of all types
- Ladle turret bearings
- Continuous casters
- Hot rolling work roll bearings
- Roll necks
- Couch, press and breast rolls
- Wood pellet mill roll bearings

TYPICAL CHARACTERISTICS

| Super S® CS EP2 Synthetic Grease                                  |                        |                   |
|---|------------------------|-------------------|
| Properties  | Test Method<br>ASTM D- | Data              |
| All Applications  |                        |                   |
| Appearance  | Visual                 | Green             |
| Consistency   | Visual                 | Smooth            |
| Soap Type   |                        | Calcium Sulfonate |
| NLGI Grade  |                        | 2                 |
| NLGI Classification   |                        | GC-LB             |
| Worked Penetration  | 217                    | 279               |
| Drop Point (°C/°F)  | 2265                   | 288(550)          |
| Oil Separation  | 1742                   | 0.5               |
| Base Oil Viscosity  | 445                    |                   |
| cSt @ 40 °C   |                        | 260               |
| cSt @ 100 °C  |                        | 24.5              |
| Viscosity Index   | 2270                   | 119               |
| Automotive Applications   |                        |                   |
| Water Washout @ 175 °F  | 1264                   | 0.5               |
| Leakage Tendencies, g loss  | 4290                   | 4                 |
| High Temp Life hours  | 3527                   | 100               |
| Fretting Protection mg  | 4170                   | 6                 |
| Elastomer Change @ 100 °C<br>Volume Change %<br>Hardness Change % | 4289                   | 7.7<br>0          |
| 4 Ball Wear Scar Diam., mm  | 2266                   | 0.45              |
| 4 Ball Load Wear Index kgf  | 2596                   | 75                |
| 4 Ball EP Weld kgf  | 2596                   | 800               |
| Rust Test   | 1743                   | Pass              |
| Low Temperature Torque N-m  | 4693                   | 9.0               |
| Industrial Applications   |                        |                   |
| Timken OK Load lbs  | 2509                   | 65                |
| Cu Corrosion  | 4048                   | 1b max            |
| Steel Corrosion, distilled water                                  | 4049                   | Pass              |
| Steel Corrosion, 3% sea water                                     | 1743                   | Pass              |
| Oxidation, psi drop @ 100 hrs                                     | 942                    | <5 psi            |

Typical test data are average values only.

Minor variations which do not affect product performance are to be expected during normal manufacturing

PRODUCT NUMBERS

- SUS 414 50/ 14oz tubes
- SUS 414-35 35 lb Pail
- SUS 414-120 120 lb keg
- SUS 414-400 400 lb drum