



# Calcium Sulfonate Thickened Greases

Premium Synthetic Oil Machinery Grease

## PRODUCT OVERVIEW

The Rheotemp™ line of high performance calcium sulfonate food-grade greases were developed specifically for the Food & Beverage and Automotive Industries. These greases are recommended for high load applications operating under extreme conditions. They are NLGI Grade 2, available in a range of base oil viscosities including ISO 32, 100, 220 and 460.

## PACKAGING OPTIONS

Rheotemp™ 662, 665, 668 & 669 are available in:

- 400 gm cartridge
- 35 lb pail
- 110 lb keg
- 385 lb drum

If your application requires a specific container, please contact us for custom packaging.

## SAMPLES

Samples are now available for testing and qualification. To best serve your needs, all inquiries should be directed through your Nye Regional Engineer.

## LUBRICANT CHARACTERISTICS



Rheotemp™ 662, 665, 668 & 669 calcium sulfonate greases provide better performance than typical Aluminum Complex thickened greases and the following benefits to customers:

- **Corrosion protection:** Provide excellent rust protection.
- **Durability:** High shear stability and resistance to water washout helps prolong machinery life.
- **Multipurpose:** One grease will fit a wide variety of applications.
- **Natural EP properties:** The unique thickener provides excellent 4-Ball EP Wear values.
- **NSF H-1:** Registered for incidental food contact.
- **Thermal stability:** High temperature properties.
- **Water-resistance:** Exceptional mechanical stability in the presence of water.
- **Wear protection:** Exhibit natural high-load wear protection and performance from thickener.

## FOOD & BEVERAGE APPLICATIONS



The following food & beverage sub-industries can benefit from lubricating application components, such as gears, bearings, and chains, with a calcium sulfonate grease.

- Baking: Ovens, freezer, proofer & mixer
- Beverage bottling
- Canning & seaming
- Carton packaging
- Dairy processing
- Frozen food processing
- Meat & poultry processing



## AUTOMOTIVE APPLICATIONS



The following automotive applications can benefit from lubricating interior, exterior, chassis, and powertrain components, with a calcium sulfonate grease.

- Axle components
- Ball joints
- Chassis
- Door latch mechanisms
- Electronic power steering
- Environmental barrier
- Gear shifters
- Steering column & shaft
- Seat gears
- Mirror gears
- Sun-roof mechanisms
- Suspension parts
- Wheel bearings
- Window gears



# Calcium Sulfonate Thickened Greases

Low and high viscosity calcium sulfonate greases compared to a typical Aluminum Complex soap thickened grease.

Lubricant Properties		Typical AL Soap Grease	Rheotemp™ 662	Rheotemp™ 669	Test Method
Base Oil		White Mineral Oil	PAO	PAO	-
Base Oil Viscosity (40°C)		30 cST	30.5 cST	400 cST	ASTM D-445
ISO Grade		32	32	460	-
Color		White	Tan	Tan	Visual
Appearance		Smooth	Smooth	Smooth	Visual
Penetration (1/10mm)	Unworked P0 (25°C)	265	267	287	ASTM D-1403
	Worked P60 (25°C)	265	281	283	ASTM D-1403
	P100K (25°C)	311	272	293	ASTM D-1217
Dropping Point		260°C	316°C	317°C	ASTM D-2265
Density (25°C)		0.89 g/cc	1.09 g/cc	0.94 g/cc	CTM 3
Water Washout (79°C, 1 hr.)		3.00%	<1%	0.00%	ASTM D-1264
Oil Separation (100°C, 24 hrs.)		2.75%	2.3%	1.3%	ASTM D-6184
Evaporation (100°C, 24 hrs.)		2.0%	0.4%	<1%	CTM 1
4-Ball Wear Scar	1200 rpm, 1 hr, 75°C, 40 kg load	0.74 mm	0.64 mm	0.57 mm	ASTM D-2266
SRV OK-Load	75°C, 50 Hz, 1 mm stroke	400 N	1300 N	750 N	ASTM D-5706
Oxidative Stability, PDSC	175°C, 3,500 kpa oxygen	<100 minutes	552 minutes	478 minutes	ASTM D-6186
4-Ball EP	Last Non-Seizure Load	<50 kg	<80 kg	100 kg	ASTM D-2596
	Weldpoint	225 kg	800 kg	315 kg	
	Load Wear Index	28 kgf	84.5 kgf	64.2 kgf	
Low Temperature Torque (-40°C)	Starting, g.cm	20,006	11,535	17,803	ASTM D-1478
	10 Min., g.cm	2,518	2,125	N/A	
	60 Min., g.cm	1,161	1,977	3,658	
Copper Corrosion (100°C, 24 hrs.)		3b	1b	1b	ASTM D-4048
EMCOR		TBD	0,1	0,1	ASTM D-6138
Certifications		NSF	NSF #152679, Halal	NSF #155180, Halal	-

The typical properties shown on this document should not be used as a basis for preparing specifications.

\*Rheotemp™ 665 and Rheotemp™ 668 are also available in this product line.

