

KNATE™

Extreme Duty, Multi-Purpose, Synthetic Blend Grease - NLGI #2, #1, #0, #00, #000



Extreme duty calcium sulphonate grease specifically formulated for construction and heavy industrial equipment.

Provides Superior Equipment Protection for...

- Industrial Manufacturing
- Food Processing
- Steel Mills & Foundries
- Paper Mills, Printing, & Packaging
- Local Authorities
- Construction, Mining, Agriculture
- Excavation & Demolition
- Utility Construction
- Concrete & Asphalt Paving

Provides superior protection for equipment against heavy loads, dirt, dust, water, and heat.

- Patented Synthetic Blend Calcium Sulphonate Grease Technology
- Protects and Stays in Place Under Severe Load Conditions
- Complete Additive Pack to Reduce Heat, Friction and Abrasive Wear
- Lasts 2 to 5 Times Longer Than Conventional Greases
- Superior Water Resistance — Won't wash out during operation, even when totally submerged
- Provides Maximum Resistance to CO₂, H₂S, and Salt Water
- Contains Nano-Guard™ Technology to Protect Metal Surfaces From Damaging Contaminants and Corrosion
- Wide Operating Temperature Range — NLGI #2 remains effective to 200°C continuous and 230°C intermittent with monitored lubrication, and down to -28°C

Meets or Exceeds These Performance Requirements

- US Steel Mill Grease Specifications
 - Roll Neck Grease, Req. No. 340
 - Extreme Pressure Grease Req. No. 350
 - Extra Duty EP Grease, Req. No. 352
 - Extreme-Temp. Req. No. 355, 370, & 372
 - Ball and Roller Bearing, Req. No. 371
 - Mill Utility Grease Req. No. 375
- Military Spec. MIL-G-23549C, MIL-DTL-23549D
- Federal Specification W-G-632a, V-V-G-632b
- CASE 251H EP
- Chrysler MS 3551E (Part # 2264833)
- General Motors Specification GM 6031-M
- DIN 51 825, DIN 51 818

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Grease contains a total additive package that sets it apart by protecting against high loads, high temperatures, corrosion and water washout

Additives

Users Benefits

Physical Properties

Premium Synthetic-Blend Base Oil	Highly refined, oxidation-resistant synthetic blend base oils provide exceptional, long-term lubrication to reduce friction, decrease heat and prevent wear.
Calcium Sulphonate Base	Extremely water resistant, heavier than water to resist washouts even in submerged environments. Withstands high heat and provides additional extreme pressure protection under heavy loads.
Adhesive & Cohesive Polymers, Tackiness Agents	Highly-elastic polymers hold grease together and in place to prevent the entry of contaminants, squeeze out, channeling and sling-off.
Rust & Corrosion Inhibitors	Blocks out corrosive elements such as acids, water, condensate and steam by forming a protective barrier on equipment surfaces to prevent chemical wear.
Extreme Pressure (EP) Agents	Heat seeking additive which increases the ability of the lubricant to prevent the extreme wear that can occur under loads.
Anti-Wear & Friction Reducing Additives	Prevent metal-to-metal contact, two surface wear, vibration and chatter. Keeps high friction surfaces, such as bearings, properly lubricated to prevent metal loss, downtime, and replacement expenses.
Oxidation Inhibitors	Extends service life of the lubricant by retarding the oxidation or breakdown process.
Shock Load Reducers	Cushions impact to minimize the stress, vibration and chatter that can occur under heavy loads and during start- stop operations.
Friction Reducers	Plats out on metal surfaces to prevent friction and wear under heavy loads.
Nano-Guard™ Gel	Advanced nano-technology gel provides superior performance by protecting metal surfaces from corrosives and contaminants.

	NLGI #2	NLGI #1	NLGI #0	NLGI #00	NLGI #000
Worked Penetration (x60) ASTM D 217	278	326	370	415	460
Wheel Bearing ILakage ASTM D 1263	0.3	N/A	N/A	N/A	N/A
Water washout ASTM D 1264	<0.1%	<0.2%	N/A	N/A	N/A
Pressure Oil Separation ASTM D 1742	0.02	0.5	N/T	N/T	N/T
Four-ball Index ASTM D 2596	101	101	N/T	N/T	N/T
Four-ball (weld) ASTM D 2596	800+	800+	500	500	400
Four-ball (wear scar) ASTM D 2596	0.341	0.4	N/T	N/T	N/T
Timken Method ASTM D 2509	75	70	45	45	40
Rust Test ASTM D 1743	Pass	Pass	Pass	Pass	Pass
Copper Corrosion ASTM D 130	1A/1B	1A/1B	1A/1B	1A/1B	1A/1B
Low Temperature Limit °C	-28	-30	-40	-40	-40
Dropping Point ASTM D 2265 °C	290+	280+	N/A	N/A	N/A
High Temperature Limit °C	230+	200+	160	160	160
Base Oil Viscosity @ 40°C	113	113	90	80	80
Base Oil Viscosity @ 100°C	12.1	12.1	12	12	12
API RP 7A1 Friction and Galling Resistance Test	0.946	0.875	N/T	N/T	N/T
DN Factor	400 000	400 000	N/A	N/A	N/A

n/a = not applicable

n/t = not tested

IDEAL FOR USE IN:

Bearing speed up to 5000 rpm with 80 mm bearing diameter. Heavy industrial equipment exposed to high/low temperatures, Babbitt bearings, high speed wheel bearings, anti-friction bearings, open gears, turbine pumps, paper and pulp mills, steel mills, chemical plants, and waste water plants. Construction equipment, sewage treatment plants, irrigation equipment, non-domestic water pumps, wet mining, scroll saws, kiln cars. High speed wheel bearings, boat trailer bearings, sleeve bearings, chassis, utility trucks, buses. Sea-going vessels, coastal and wharf equipment, inland waterway applications.

DO NOT USE FOR:

Any application with a continuous temperature exceeding 200°C or 230°C intermittently.