MINING

Maintaining Safe Operations. Together.

Core Mining Products for North America

Quaker Houghton™
Forward Together™

Efficiency, Durability And Most Of All, Safety

Today's mining industry must cope with a wide variety of priorities, ranging from safety to effectiveness and cost-efficiency. Solutions must work anywhere, in various different situations and conditions. Most of all, these solutions must be reliable and adaptable to your operations – not someone else's.

That's where the Quaker Houghton worldwide network of technical experts come in. Our team of technical sales, laboratory development, and manufacturing associates bring unique value to the mining industry. Having locations across the globe is important to us, but where our global reach is a true benefit is our unique advantage of having each location connected, working together to supply mining operations worldwide.

You Need Solutions That Meet The Real Demands Of A Complex Industry

Efficiency, durability and most of all, safety. You need solutions that work anywhere, in different situations and conditions.

Innovative Offerings From Quaker Houghton Solutions

DUST SUPPRESSANTS
- Reduce generation of airborne particulate matter in dust-prone areas

GROUND CONTROL AGENTS
- Consolidate and stabilize unstable ground
- Seal against water ingress

LONGWALL FLUIDS
- Fire-resistant
- Water-based hydraulic fluids for roof supports
- Storage fluids that protect against freeze damage and corrosion

FIRE-RESISTANT AND SPECIALTY HYDRAULIC FLUIDS
- For fire-hazardous and environmentally sensitive applications without compromising overall operations

GEAR LUBRICANTS
- Lubricate and withstand the extreme operation conditions experienced by heavily loaded enclosed gears

INDUSTRIAL GREASES
- Lubricate and reduce fluid related problems in extreme applications

CLEANERS
- Provide cleaner housings and machinery
- Optimum surface quality

DUSTGRIP® TURBO

A **surfactant based** chemistry designed to change surface tension to accelerate water penetration in areas where dust is a hazard, increasing safety through reduction in airborne particulate while reducing water consumption.

Benefits

- Can be used with existing equipment
- Mixes easily with water
- Reduces airborne dust, improving visibility, and air quality
- Reduces water consumption, equipment maintenance, and labor
- No post application rinsing equipment

Applications

- Mining/Cutting processes
- Crushing
- Conveying of mining material

Typical Values

PROPERTIES	TURBO
Appearance	Clear solution
pH (Concentrate)	10.6
Typical Application Concentration	0.1%-0.2%
Specific Gravity (D287)	1.09
Viscosity at 100°F, cSt	4
Freeze Point (D97) °C/°F	-9/16
pH at 0.1%	8.0

DUSTGRIP® JFP-95

A **solid surfactant** dust suppressant product that readily dissolves in water. Formulated to lower water surface tension to penetrate and effectively knock down dust particles. DUSTGRIP® JFP-95 provides ongoing dust suppression with minimal maintenance and oversight. Solubility will depend on water temperature and flow velocity.

Benefits

- Compatible with longwall hydraulic fluids
- 100% water soluble
- Quick application
- Will not plug fluid filters
- Protects against corrosion
- Convenient to transport underground
- Reduces airborne dust, improving visibility, and air quality

Applications

- Mining/Cutting processes
- Crushing
- Conveying of mining material

Typical Values

PROPERTIES	JFP-95
Appearance	Pale yellow, cartridge
Typical Application Concentration, %	Self-metering -No measuring devices required
Bulk Density lbs/gal	8.95

DUSTGRIP® SUPERBOND

An acrylic polymer based **binding agent**, soil stabilizer and dust control solution that binds the soil matrix to create a strong, durable layer suitable for a variety of applications.

Benefits

- Can be mixed with any type of water
- Can be used with existing equipment
- Reduces water consumption
- Does not evaporate
- Non-toxic
- Long lasting with lower maintenance requirements

Applications

- Haul/ unpaved roads
- Tailings/ Supply Yards/ Hard Stands
- Ash ponds

Typical Values

PROPERTIES	SUPERBOND
Appearance	White milky liquid
Viscosity at 40°C (D445), cSt	20
pH	9.6
Freeze Point (D97) °C/°F	0 / 32
Recommended Concentration	10-20%
Solution pH	9.0

DUSTGRIP® SUPER TAC

DUSTGRIP® SUPER TAC is a new generation dust suppressant that binds the surface roadway while maintaining sub-soil moisture content. DUSTGRIP® SUPER TAC is well suited for dry to moderately rainy climates. The formula has the ability to retain moisture and rehydrolize after initial application.

Benefits

- Can be mixed with any type of water
- Can be used with existing equipment
- Reduces water consumption
- Does not evaporate
- Reduces environmental impact, non-contaminant, and non-toxic
- Long lasting with lower maintenance requirements

Applications

- Haul/ unpaved roads
- Tailings/ Supply Yards/ Hard Stands
- Ash ponds

Typical Values

PROPERTIES	SUPER TAC
Appearance	Dark brown fluid
pH (Concentrate)	5.5
Typical Application Concentration	20%
Specific Gravity (D287)	1.0824
Kinematic Viscosity at 40°C	29 mm²/s
Freeze Point (D97) °C/°F	25°F / -4°C
Flash Point (ASTM D92)	N/A
Solution Appearance at 25%	Brown uniform fluid
Bulk Density (lb/gal)	9.03
Storage Temperature	>32°F / 0°C

DUSTGRIP® ROZ

An organic emulsion that effectively binds, tacks, and suppresses dust as it dries. Forms a **stable, rigid seal** to provide durable control and suppression of dust caused by wind, vehicle and heavy equipment traffic.

Benefits

- Cost effective
- Increases safety through improved visibility
- Reduces water use
- Improves air quality in work environment
- Easy to mix and apply

Applications

- Roads
- Stockpiles
- Quarries/ Construction Sites

Typical Values

PROPERTIES	ROZ
Appearance	Light brown fluid
Typical Application Concentration	10%
Kinematic Viscosity at 40°C	10 mm²/s
Specific Gravity at 20°C (D287)	.974
Freeze Point (D97) °C/°F	-4 / 25
Solution Appearance at 10%	Brown uniform fluid
Bulk Density (lb/gal)	8.13
pH (Concentrate)	7.9
Storage Temperature	>32°F / 0°C
Flash Point (ASTM D92)	N/A

DUSTGRIP® 007

A naturally occurring polymer that **forms a thin, flexible seal** over an ore body to provide durable control and suppression of dust.

Benefits

- Cost effective
- Increases safety through improved visibility
- Reduces water use
- Improves air quality in work environment
- Easy to mix and apply
- Non-corrosive

Applications

- Haul Roads/ Track Haulage
- Stockpiles
- Quarries/ Construction sites

Typical Values

PROPERTIES	007
Appearance	Clear amber fluid
Typical Application Concentration	1.0 - 5.0%
Specific Gravity @ 15°C(D287)	1.065
Viscosity at 40°C, cSt	4.0
Solution Appearance	Hazy uniform solution
Storage Temperature °C/°F	> 0 / > 32
Freeze Point (D97) °C/°F	-8 / 5
pH (5% in water)	8.7

DUSTGRIP® DE-ICE

A water based de-icing fluid that is based on a readily biodegradable pour point depressant.

Benefits

- Low pour point
- Biodegradable
- Eliminates coal or aggregate sticking in transport vehicles

Applications

- Truck Beds
- Rail Cars
- Conveyor Belts

Typical Values

PROPERTIES	DE-ICE
Appearance	Amber, viscous fluid
Brookfield Viscosity at 80°F (ASTM D2196)	1080 cps
Density at 60°F (ASTM D1298) lbs/gal	9.7
pH (Concentrate) (ASTM D70)	11.8
pH (10% solution in tap water) (ASTM D70)	11.5
Pour Point °C/°F	5 / -40

DUSTGRIP® RT SERIES

Formulated with both a latex and a wood pulp by-product base that **forms a rigid layer** to reduce or eliminate dust emissions during transportation and storage of coal, ore, and mineral stocks.

Benefits

- Reduces water consumption
- Controls dust over hauls of 800+ miles without re-application
- Effective in a wide operating temperature range
- Reduces man-made moisture to coal and rail transport of water

Applications

- Rail car topper
- Stockpiles
- Embankments/ Roadways

Typical Values

PROPERTIES	RT	RT-B	RT-L
Appearance	Dark brown	Dark brown	Milky
Viscosity at 40°C, cSt	0.9	1.2	1.2
pH	7.5	7.3	8
Freeze Point (D97) °C/°F	0 / 32	-3 / 26	0 / 32
Recommended Concentration	5%	5%	5%
Solution pH	7.4	7.4	7.5

MINETECH™ PUR 70

A **two-component polyurethane system** that can be processed through low or high pressure dispensing equipment. When properly mixed at a ratio of one to one by volume, it cures to a rigid polyurethane polymer with high physical properties, resistance to water and chemical attack, and long term durability to consolidate loose rock strata.

Benefits

- Good penetration into small fissures, due to its low viscosity
- Does not contain any Volatile Organic Compounds
- High flexibility
- Excellent adhesion, chemical resistance and durability
- Full mechanical strength achieved very quickly, resulting in minimum disruption to workplace

Applications

- Ground consolidation and stabilization
- Injection of rock bolts
- Ring grouting seals

Typical Values

PROPERTIES	PUR 70
VOC, g/L	0
Hardness (ASTM D-2240)	Shore D Hardness 80
Volume Solids	100%
Mix Ratio	1:1 by volume
Density (ASTM D-1622), lbs/ft^3 / kg/m^3	70.9 / 1136
Compressive Strength (ASTM D-1621), psi	> 10,000 psi at 10% deflection
Tensile Strength (ASTM D-638), psi	6080
Shear Strength (ASTM D-732), psi	5566
Flexural Strength (ASTM D-790), psi	> 10,000
Water Absorption (ASTM D-2842)	< 1%
Elongation (ASTM D-638)	2%
Gel Time (77°F/25°C)	45 seconds
Gel Time (50°F/10°C)	70 seconds

MINETECH™ AQUASIL

A two-component urea silicate system that can be processed through low or high pressure dispensing equipment in the presence of water. When properly mixed at a ratio of one to one by volume, it achieves high physical properties, resistance to water and chemical attack, and long term durability to consolidate loose rock strata.

Benefits

- Good penetration into small fissures, due to its low viscosity
- Does not contain any Volatile Organic Compounds
- Does not foam in the presence of water
- Light color for easy detection in the strata cracks
- Excellent adhesion, chemical resistance and durability
- High flexibility
- Full mechanical strength achieved very quickly, resulting in minimum disruption to workplace

Applications

- Seals against water ingress
- Ground consolidation and stabilization
- Injection of rock bolts

Typical Values

PROPERTIES	TYPICAL VALUES
Compressive Strength (ASTM D-695), psi	6888
Tensile Strength (ASTM D-638), psi	2287
Shear Strength (ASTM D-732), psi	2405
Flexural Strength (ASTM D-790), psi	4104

PROPERTIES	PART A	PART B
Viscosity (ASTM D-1638), cps	200	300
Specific Gravity	1.23	1.55
Color	Dark amber	Colorless (Clear)
Flashpoint, °C/°F	121 / > 250	121 / > 250

MINETECH™ FOAMSIL

A fast reacting, two-component urea-silicate foam designed for rapid cavity filling and strata consolidation. When properly mixed at a ratio of one to one by volume, expands up to 30 times its initial volume. Once reacted, remains insoluble to water, maintains high compressive strength, and adapts readily to any strata movement. Can be applied with various types of dual component piston pumps.

Benefits

- Fast reacting
- Flame retardant
- Low exothermic temperature
- Does not contain any Volatile Organic Compounds
- Excellent adhesion, chemical resistance and durability

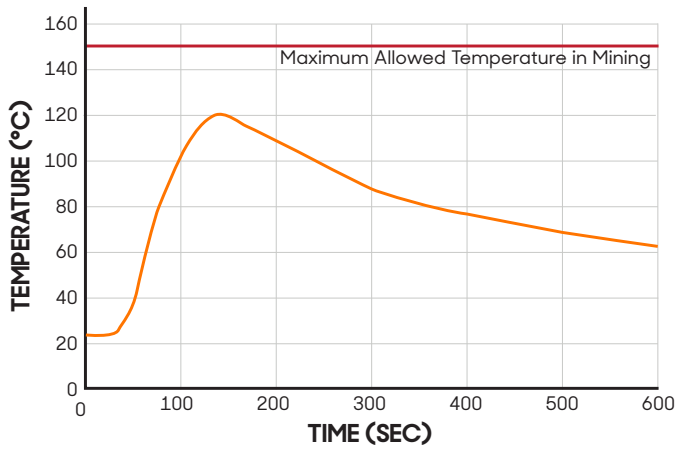
Applications

- Cavity filling in coal and strata
- Consolidation of rocks, sands and gravel
- Stabilization of cavities in tunnels
- Mine ventilation

Typical Values

PROPERTIES	PART A	PART B
Viscosity at 77°F (25°C), cP	200-300	30-80
Specific Gravity, g/cm^3	1.22	1.35
Color	Dark amber	Light Amber (Clear to Hazy)
Flashpoint, °C/°F	121 / > 250	121 / > 250

MIXING	
Mix Ratio	1:1 by volume (90.8:100 by mass)
Start of Foaming (sec)	30 ± 10
End of Foaming (sec)	60 ± 10
Foam expansion factor	Up to 30
Foam density, lbs/ft^3 / kg/m^3	2.50/40



MINETECH™ Q-FOAM

A disposable, closed-cell, low-pressure, expandable spray foam kit consisting of two chemical components. Expands 6-10 times initial volume and becomes tack free within 30 seconds. Once dispensed, the product quickly creates an air tight seal around mine ventilation devices to improve overall ventilation efficiency.

Benefits

- Does not contain CFC's, Penta-BDE's, VOC's or Urea-Formaldehyde
- Excellent air tight seal
- Low pressure
- Increased yield
- Closed cell content > 95%
- Portable

Applications

- Mine ventilation air sealant

Typical Values

PROPERTIES	Q-FOAM
Density: Free Rise, lbs/ft^3	1.75
Density: In Place, lbs/ft^3	2.0
R Factor at 1" thickness (ASTM C518)	6.7
Compressive Strength ASTM (C518), psi (parallel)	13.8
Closed Cell Content (ASTM D2856)	> 95%
% Volume Change, 158°F (70°C), 100 RH, 7 Days	2.01
% Volume Change, -60°F (-51°C), 7 days	-0.42
Temperature Tolerance:	-250°F - 250°F
Air Barrier Properties at 75 Pa (ASTM E283)	.005 L/s/m^2
Perm Rating at 1"/ at 3" (ASTM E96)	3.70 Perms / 1.83 Perms
Tensile Strength (ASTM D1623), psi	36.14
Flamespread at 2" thickness (ASTM E84)	20
Smoke Developed at 2" thickness (ASTM E84)	300
Rise and Tack Free Time	30 - 40 seconds
Yield:	15 ft^3 / 180ft^2 at 1" thick

QUINTOLUBRIC® 814-02 | 818-02

High water-based (HFA) biodegradable fire-resistant hydraulic fluids, engineered to pass severe tests developed by major longwall shield OEMs. These fluids offer superior fluid dynamics and improved system cleanliness, with no formation of damaging abrasive scum. Maintenance free, they keep equipment clean and corrosion-free for years of service.

Benefits

- Approved by Joy/Komatsu Mining Machinery and Caterpillar via mine-specific testing
- Biodegradable in accordance with ISO 7827
- Compatible with all commonly used longwall fluids for easy conversion
- Dyed for easy underground leak detection and high pressure fluid injection
- Reduced environmental impact
- Used at 2% in almost any type of water
- MSHA Approved

Applications

- Longwall shields

Typical Values

PROPERTIES	814-02	818-02
Appearance	Translucent amber green solution	Clear yellow-green solution
HFA – Fluid Type	Micro-emulsion	True solution synthetic
Specific Gravity (ASTM D287)	1.00	1.015
Density lbs/gal | g/ml	8.34 | 1.00	8.47 | 1.015
Freeze Point (ASTM D97) °C/°F	-4.4/24	-3.3/26
Pour Point (ASTM D97) °C/°F	-4.4/24	-3.3/26
pH of 2% in Distilled Water (ASTM D70)	10.1	10.1
Viscosity @ 100°F (D445) SUS/cSt	500 / 108	51 / 7.7
TYPICAL PERFORMANCE 2% SOLUTION		
Appearance	Translucent amber green solution	Clear yellow-green solution
Rust Prevention	Passes IP 135 Steel Finger Test in Saline Water at 0.8%	Passes at 2%: • OEM Crevice Corrosion Test EWN 8350 Part 3 • 7th Luxembourg Corrosion Test Section 5.9.1
Bacteria and Fungi	Contains Preventive Additives	Contains Preventive Additives

MINETECH™ PROTECTION FLUID

An Ethylene Glycol free storage fluid that provides protection against freeze damage and corrosion that remains effective down to -58°F (-50°C) even when diluted with up to 10% water or water-based longwall fluid. The protection fluid is formulated to protect both ferrous and non-ferrous surfaces.

Benefits

- Approved by Joy Mining Machinery, Caterpillar and Famur via mine-specific testing
- Protects against freeze damage and corrosion during long-term storage
- Excellent corrosion protection and low temperature stability
- Very low freezing point

Applications

- Longwall roof support units

Typical Values

PROPERTIES	PROTECTION FLUID
Appearance	Blue
Specific Gravity at 60°F/15°C (D1298)	1.06
Density at 60°F, lbs/gal / 15°C, g/ml	9.30 / 1.19
Freeze Point (D97) °C/°F	< -50 / -58
Pour Point (D97) °C/°F	< -50 / -58
pH (D70)	9.2
Viscosity (D445) at 100°F, SUS at 40°C, cSt	 53 8

QUINTOLUBRIC® 888-46 | 888-68 | 822-450

Synthetic water free hydraulic fluids designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist. These fluids do not contain water, mineral oil, or phosphate ester, and are based on high-quality, synthetic, organic esters and carefully selected additives.

Benefits

- Global formulation
- Excellent shear stability
- Best-in-class oxidation stability
- Environmentally friendly

Applications

- Fixed hydraulic systems and mobile equipment

Typical Values

PROPERTIES	888-46	888-68	822-450
ISO	46	68	450
Appearance	Amber fluid	Amber fluid	Amber fluid
Kinematic Viscosity (ASTM D445) at 0°C, cSt at 20°C, cSt at 40°C, cSt at 100°C, cSt	 320 109 46 9.5	 554 135 68 12.5	 100
Viscosity Index (ASTM D2270)	190	185	190
Density at 15°C (ASTM D1298) g/cm^3	0.92	0.92	0.92
Acid Number (ASTM D974) mg KOH/g	2.0	2.0	2.0
Pour Point (ASTM D97) °C/°F	< -30 / < -22	< -30 / < -22	< -30 / < -22
Foam Test at 25°C (ASTM D892) Sequence 1	50-0 ml-ml	50-0 ml-ml	
Corrosion Protection ISO 4404-2 ASTM D665A/D130	 Pass Pass/1a	 Pass Pass/1a	 Pass/1a
Dry TOST (ASTM D943 mod.)	800 hrs	800 hrs	
Flash Point (ASTM D92) °C/°F	300 / 572	> 300 / 572	> 265 / > 509
Fire Point (ASTM D92) °C/°F	360 / 680	360 / 680	> 315 / > 599
Air Release (ASTM D3427)	7 min	7 min	
Vane Pump Test (ASTM D2882)	< 5 mg wear	< 5 mg wear	
Gear Lubrication (DIN 51354-2)	> 12 FZG load stage	> 12 FZG load stage	
Water Separability (ASTM D1401) ml-ml-ml (min.)	42-38-0 (30)	42-38-0 (30)	
MSHA Approvals	Not Approved	Approved	Approved

MINETECH™ EP SERIES

A series of synthetic gear lubricants formulated with synthetic PAO base fluids and fortified with proprietary additive systems to enhance their exceptional performance. The base fluid has outstanding thermal stability, and a naturally high viscosity index.

Benefits

- Excellent performance and pumpability in extreme temperatures and heavy loading
- Reduced input power consumption through reduced friction
- Compatible with system materials
- Superior oxidation stability
- Maximum protection against wear, rust, corrosion, and foaming
- Suitable for various gear units

Applications

- Heavily loaded enclosed gears - plain or roller element

Typical Values

PROPERTIES	EP-220	EP-320	EP-460
Specific Gravity	0.877	0.876	0.882
ISO Grade	220	320	460
AGMA Number	5EP	6EP	7EP
Viscosity at 40°C, cSt at 100°C, cSt	 218 23.2	 327 36.6	 445 37.4
Viscosity Index (D2270)	140	158	140
Pout Point (D97) °C/°F	-43 / -45	-40 / -40	-37 / -35
Flash Point (D92) °C/°F	221 / 430	241 / 465	224 / 435
Copper Corrosion (D130)	1B	1A	1B
Rust Test (D665A)	Pass	Pass	Pass
Timken OK (D2509) lbs	65	65	65
4-Ball Wear (D2596) lbs	315	315	315
4-Ball Wear, Scar dia (D2266) mm	.34	.48	.30

MINETECH™ LST-0-EP

A synthetic semi-fluid gear lubricant formulated for use where a conventional gear lubricant may not offer sufficient lubrication. As a semi-solid (NLGI 0) grease that becomes relatively fluid when it is mechanically sheared as would occur in a gearbox.

Benefits

- Seals in lubricants and seals out contaminants
- Lubrication provided by a fluid and not a solid
- Superior oxidation stability and stability control

Applications

- Industrial gears - in difficult to access or readily serviceable areas

Typical Values

PROPERTIES	LST-O-EP
Visual Color/Texture	Yellow/Smooth
NGLI Grade	0
Thickener Type	Lithium Soap
Oil Type	Synthetic
Viscosity (D445) at 40°C, cSt at 100°C, cSt	 128 22
Viscosity Index (D2270)	210
Pout Point (D97) °C/°F	-30 / -22
Flash Point (D92) °C/°F	285 / -545
Dropping Point (D2265) °C/°F	212 / -415
Timken OK (D2509) lbs	100
4-Ball Wear (D2596) lbs	400
4-Ball Wear, Scar dia. (D2266) mm	0.45
Compatibility Mineral Oils Lithium Grease	 Good Excellent

MINETECH™ ASSEMBLY COMPOUND

Water soluble paste composed of ingredients that provide lubrication and corrosion protection. The formula is readily soluble in longwall fluid and will not block filters downstream. This unique product helps reduce the difficulty of fitting and hose assembly on longwall roof shields when repairs are needed quickly.

Benefits

- Compatible with longwall hydraulic fluids
- 100% water soluble
- Quick application
- Will not plug fluid filters
- Protects against corrosion

Applications

- Longwall roof shields - fitting and hose assemblies

Typical Values

PROPERTIES	ASSEMBLY COMPOUND
Appearance	Amber
Consistency	Paste
Density at 15°C, g/cm^3	0.940
NLGI ASTM D 217-02	> 0
Drop melting point °C/°F	> 80 / 171

QUAKERTEK™ AX SERIES

Aluminum complex thickened lubricating greases that have been specifically formulated to provide water-resistance, and the ability to withstand extreme pressure while protecting against rust, corrosion, and abrupt changes in force.

Benefits

- High resistance to water washout
- Rust and corrosion protection
- Protection at high temperatures
- Excellent extreme pressure protection for heavy loading
- High film strength

Applications

Used in applications that experience heavy loads, water washout, rust and corrosion.

- Belt Rollers
- AFC Sprocket
- Crusher Elements

Typical Values

PROPERTIES	AX 2502-EP	AX 3202-EP	AX 4602-EP
NLGI	2	2	2
Appearance	Smooth	Smooth	Smooth
Color	Brown	Brown	Brown
Viscosity at 40°C (104°F), cSt	250	320	460
Water Washout	15%	7.5%	5.0%
Water Spray-off	20%	4.0%	8.0%
Timken OK Load, kg	20	23	18

QUAKERTEK™ CS SERIES

A unique line of **Calcium Sulfonate** lubricating greases that utilize an entirely new approach in thickener technology. Formulated with heavy metals, includes multi-functional grease with superior corrosion protection and extreme load carrying properties even in the presence of elevated levels of water contamination.

Benefits

- Resists water washout
- Excellent lubricity
- Excellent corrosion protection
- Excellent shear stability

Applications

Used in applications that experience water washout, corrosion and shear.

- Belt Rollers
- AFC Sprocket
- Crusher Elements

Typical Values

PROPERTIES	CS 2202-EP	CS 3201-EP	CS 4602-EP
NLGI	2	1	2
Appearance	Smooth	Smooth	Smooth
Color	Tan	Tan	Tan
Viscosity at 40°C (104°F), cSt	220	320	485
Water Washout	2.0%	1.8%	0.7%
Water Spray-off	23%	75%	45%
Timken OK Load, kg	25	25	25

QUAKERTEK™ L SERIES

Lithium greases formulated with the highest quality base oils and additives. The series is designed to provide superior load and anti-wear performance in aggressive applications.

Benefits

- Corrosion and oxidation protection
- Good flow characteristics
- Very high resistance to water washout
- Formulated for extreme pressure performance

Applications

Universal grease used in applications that experience high temperatures, heavy loads and shock loads.

- General Purpose

Typical Values

PROPERTIES	L 1502-EP	L 2202-EP
NLGI	2	2
Appearance	Smooth	Smooth
Color	Dark amber	Dark amber
Viscosity at 40°C (104°F), cSt	150	220
Water Washout	5.0%	6.7%
Water Spray-off	31%	37%
Timken OK Load, kg	18	18

QUAKERTEK™ LX SERIES

Series of **lithium complex greases** formulated to ensure good load carrying capabilities that create a protective film to deter friction and promote shear stability, oxidation stability, and stability under pressure while also providing water and corrosion resistance.

Benefits

- Excellent resistance to water washout
- Rust and corrosion protection
- Good shock-loading
- Excellent extreme pressure protection for heavy loading
- Excellent film strength

Applications

Used in applications that experience high temperatures, heavy loads and shock loads.

- General Purpose
- AFC Sprocket
- Stage Loader Sprocket
- Belt Rollers
- Crusher Elements
- Feeders

Typical Values

PROPERTIES	LX 2202-EP	LX 3202-EP	LX 4602-EP
NLGI	2	2	2
Appearance	Smooth/ Tacky	Smooth	Smooth/ Tacky
Color	Dark	Dark	Dark
Viscosity at 40°C (104°F), cSt	220	320	460
Water Washout	3.9%	4.0%	8.5%
Water Spray-off	15%	20%	40%
Timken OK Load, kg	14	23	23

QUAKERTEK™ UX SERIES

Polyurea greases specifically formulated and manufactured to provide lubrication in extreme temperature applications. Maintains good water resistance and extends product life in both cold and hot environments.

Benefits

- Seals in lubricants and seals out contaminants
- Lubrication provided by a fluid and not a solid
- Superior oxidation stability and stability control

Applications

Used in applications that experience water washout and/or extreme temperatures.

- Motor Bearings
- Electrical applications

Typical Values

PROPERTIES	UX 3202-EP	UX 4602-EP	UX 1002-R
NLGI	2	2	2
Appearance	Smooth	Smooth	Smooth
Color	Brown	Brown	Red
Viscosity at 40°C (104°F), cSt	320	460	100
Dropping Point, °C/°F	> 288 / > 550	> 288 / > 550	260 / 500
Copper Corrosion	1B	1B	1A
Timken OK Load, kg	18	18	N/A

QUINTOPLEX™ LXS SERIES

Synthetic Lithium Complex thickened fire-resistant greases that reduce fires in hot environments, while providing best-in-class water resistance, extreme pressure protection and other benefits. They are formulated with QUINTOLUBRIC® base stock that have been approved by Factory Mutual as less hazardous.

Benefits

- Best-in-class fire resistance
- Extreme pressure lubrication protection
- Shock loading protection
- Good water resistance
- Excellent low temperature pumpability
- Good rust and corrosion protection

Applications

Used in applications that experience fire hazards or in environmentally sensitive areas.

- General Purpose
- Belt Rollers

Typical Values

PROPERTIES	LXS 1001-EP	LXS 1002-EP
NLGI	1	2
Appearance	Smooth/Tacky	Smooth/Buttery
Color	Black	Black
Viscosity at 40°C (104°F), cSt	105	100
Water Washout	8.5%	8.9%
Water Spray-off	80%	62%
Timken OK Load, kg	15.9	15.9

QUAKERTEK™ LXS SERIES

High performance synthetic greases that optimize the unique features of polyalphaolefin (PAO) base stock with a special lithium complex thickener. Highly efficient synthetic greases provide bearing lubrication temperatures ranging from -30°-160°C / -22°F-320°F. These greases are capable of working under severe operating conditions with regard to speed, loads, and temperature.

Benefits

- Excellent resistance to water washout
- High Viscosity Index
- High dropping point
- Excellent oxidation resistance
- High temperature stability
- Compatible with most plastics and elastomers
- Can increase maintenance intervals

Applications

Used in applications that experience extreme temperatures, speeds and loads.

- General Purpose
- AFC Sprocket
- Stage Loader Sprocket
- Belt Rollers
- Crusher Elements
- Feeders

Typical Values

PROPERTIES	LXS 2202-EP	LXS 2201-EP	LXS 4602-EP
NLGI	1	2	2
Appearance	Smooth	Smooth	Smooth
Color	Tan	Tan	Tan
Viscosity at 40°C (104°F), cSt	220	220	460
Water Washout	1.8%	2.0%	0.7%
Water Spray-off	75%	23%	45%
Timken OK Load, kg	25	25	25

QUAKER FORMULA® PURE BLUE™ HD

A **water-based, low alkalinity maintenance cleaner** formulated for superior cleaning with worker and environmentally friendly properties. This EPA approved formulation contains hard-working surfactants to cut through oil, grease, and shop machinery while also being less irritating for workers.

Benefits

- Excellent Cleaning - cuts through oil and grease in multiple cleaning applications
- Worker Compatibility - less irritating and much safer to handle compared to other maintenance cleaners
- Environmentally Friendly - Non-hazardous product without phosphates, silicates, phenols, or glycol ether solvents
- Cost Effective - One product replaces many resulting in simplified ordering and reduced costs

Applications

- Equipment/ Machinery
- Tools
- General Maintenance Cleaning Applications

Typical Values

PROPERTIES	PURE BLUE™ HD
Appearance	Clear blue
Density at 15°C, g/cm³	1.030
Bulk Density at 60°F, lbs/gal	8.60
Flash Point via COC, °C/°F	Boils at 100 / 212
Neat pH	8.7
Odor	Mild soapy

APPLICATION	DILUTION
Floor Scrubbers	3 - 10%
Hand Mop Operations	5 - 20%
Soak Tank (Room Temp)	2 - 10%
Wipe On	1 - 100%
Steam Cleaning	3 - 10%
Odor	Mild soapy

QUAKER FORMULA® PURPLE PRO

Maintenance cleaner specifically formulated to provide excellent penetration and loosening of soils in a variety of applications. This industrial strength cleaner will efficiently remove such soils as grease, grime and grit from floors, equipment, walls and equipment housings.

Benefits

- No Flash or Fire Points - safe in hazardous work areas
- Contains no chlorinated solvents, germicides, or bactericides
- Minimal surface residue
- Low alkalinity
- May be used in some hand wiping operations
- High Detergency – easy removal grease and oils from hard surfaces

Applications

- Equipment/ Machinery
- Tools
- General maintenance cleaning applications

Typical Values

PROPERTIES	PURPLE PRO
Appearance	Clear purple liquid
Pounds per gallon at 60°F, lbs/gal	8.76
Specific Gravity at 60°F, g/cm³	1.05
pH at 5%	12.4

Product Overviews

PRODUCT	STORAGE	ITEM NUMBER
DUST SUPPRESSANTS		
DUSTGRIP®	• Stable at 0 to 38°C (32 to 100°F) • Recommended to keep containers tightly closed when not in use and store in a dry and well ventilated area	015027
DUSTGRIP® TURBO	• Stable at -7 to 49°C (20 to 120°F) • Keep containers tightly closed when not in use and store away from heat/direct sunlight in a dry, well ventilated area • Shelf life is 12 months from the manufactured date	041165
DUSTGRIP® JFP 95	• Stable at 0 to 38°C (32 to 100°F) • Keep containers tightly closed when not in use and store away from heat/direct sunlight in a dry, well ventilated area • If stored properly shelf life is 24 months from the manufactured date	016627
DUSTGRIP® SUPERBOND	• The recommended long-term storage temperature range is 0 to 50°C (32 to 122°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	016808
DUSTGRIP® SUPER TAC		015229
DUSTGRIP® ROZ	• The recommended long-term storage temperature range is 0 to 38°C (32 to 100°F) • Keep containers tightly closed and store in a dry and well-ventilated area • Shelf life is 6 months from the manufactured date	015228
DUSTGRIP® 007	• The recommended long-term storage temperature range is 0 to 38°C (32 to 100°F) • Keep containers tightly closed when not in use and store in a dry and well-ventilated area • If stored properly shelf life is 24 months from the manufactured date	014998
DUSTGRIP® RT	• Stable at 4 to 49° C (40 to 120°F). Recommended to store containers with the lid tightly closed when not in use • Keep in a well ventilated area, and away from heat and out of direct sunlight • When stored at recommended temperatures in original, unopened containers, this product has a shelf life of 12 months from the manufactured date	041177
DUSTGRIP® RT-B		015262
DUSTGRIP® RT-L		015834
DUSTGRIP® DE-ICE	• Stable at -29 to 38° C (-20 to 100°F) • Recommended to store containers with the lid tightly closed, in a well ventilated area, and away from heat and • Keep out of direct sunlight • When stored at recommended temperatures in original, unopened containers, this product has a shelf life of 12 months from the manufactured date	016034
GROUND CONTROL AGENTS		
MINETECH™ PUR 70	• Recommended to store the product in original sealed containers at a temperature range of 15 to 38° C (60 to 90°F) • Opened containers must be handled properly to prevent moisture contamination • Shelf-life is 12 months from the manufactured date	104173
MINETECH AQUASIL™	• Recommended to store the product in original sealed containers at a temperature range of 15 to 38° C (60 to 90°F) • Opened containers must be handled properly to prevent moisture contamination • Shelf-life is 12 months when properly stored • * MINETECH AQUASIL™ part A is moisture sensitive. MINETECH AQUASIL™ part B is sensitive to freezing temperatures, so do not allow to freeze	Part A: 104173 Part B: 016128
MINETECH™ FOAMSIL	• Recommended to store the product in original sealed containers at a temperature range of 15 to 38° C (60 to 90°F) • Opened containers must be handled properly to prevent moisture contamination • Shelf-life is part A is 6 months when properly stored, and part B is 12 months when properly stored • *MINETECH™ FOAMSIL part A is moisture sensitive. MINETECH™ FOAMSIL part B is sensitive to freezing temperatures, so do not allow to freeze	Part A: 016127 Part B: 016793
MINETECH™ Q-FOAM	• Recommended to store in a dry area. Do not expose the kits or tanks to open flame or temperatures above 120°F (49°C) • Excessive heat can cause premature aging of components resulting in a shorter shelf-life • For best results, chemical temperature must be between 24 to 29° C (75 to 85°F) • Warm/Cool tanks for a minimum of 1 day prior to use	Part A: 106025 Part B: 106026
LONGWALL FLUIDS		
QUINTOLUBRIC® 814-02	• Stable above freezing to 60°C (32 to 140°F) • Keep containers tightly closed when not in use and store away from heat/direct sunlight in a dry area • If stored properly shelf life is 36 months from the manufactured date	082321
QUINTOLUBRIC® 818-02		041113
QUINTOLUBRIC® 914		041188
MINETECH™ PROTECTION FLUID	• Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry, well-ventilated area • Shelf life is 12 months from the manufactured date	041124

PACKAGING

DUST SUPPRESSANTS

- Bulk
- Totes
- Drums
- Pails

LONGWALL FLUIDS

- Bulk
- Totes
- Drums
- Pails

GROUND CONTROL AGENTS

- Drums
- * MINETECH™ Q-FOAM: 40 lb portable/ disposable container with foam dispensing gun

PRODUCT	STORAGE	ITEM NUMBER
FIRE-RESISTANT HYDRAULIC FLUIDS		
QUINTOLUBRIC® 822-450	• Stable at -30 to 93.3°C (-22 to 200°F) • Keep containers tightly closed when not in use and store away from heat/direct sunlight in a dry area • If stored properly shelf life is 36 months from the manufactured date	002437
QUINTOLUBRIC® 888-46		052317
QUINTOLUBRIC® 888-68		087414
GEAR LUBRICANTS		
MINETECH™ EP-220	• Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area • If the following criteria are adhered to, the product can be stored for at least twelve months	014467
MINETECH™ EP-320		014468
MINETECH™ EP-460		014469
MINETECH™ LST-O-EP		015802
MINETECH™ ASSEMBLY COMPOUND		015337
GREASES		
ALUMINUM COMPLEX		
QUAKERTEK™ AX 2502-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	015266
QUAKERTEK™ AX 3202-EP		015822
QUAKERTEK™ AX 4602-EP		015402
CALCIUM SULFONATE		
QUAKERTEK™ CS 2202-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	015988
QUAKERTEK™ CS 3201-EP		016014
QUAKERTEK™ CS 4602-EP		016201
LITHIUM		
QUAKERTEK™ L 1502-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	015416
QUAKERTEK™ L 2202-EP		016089
LITHIUM COMPLEX		
QUAKERTEK™ LX 2202-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	016009
QUAKERTEK™ LX 3202-EP		015361
QUAKERTEK™ LX 4602-EP		016110
POLYUREA		
QUAKERTEK™ UX 3202-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	016030
QUAKERTEK™ UX 4602-EP		015878
QUAKERTEK™ UX 1002-R		015861
SYNTHETIC LITHIUM COMPLEX		
QUINTOPLEX™ LXS 1001-EP	• Recommended to be stored for at least 24 month • Recommended long-term storage temperature range: 0 to 40°C (32 to 104°F) • Keep containers/drums tightly closed when not in use and store in a dry and well-ventilated area	016015
QUINTOPLEX™ LXS 1002-EP		015819
QUAKERTEK™ LXS 2201-EP		016037
QUAKERTEK™ LXS 2202-EP		015986
QUAKERTEK™ LXS 4602-EP		016055
CLEANERS		
QUAKER FORMULA® PURE BLUE™ HD	• Recommend that product be stored out of direct sunlight in temperatures between 4 to 43°C (40 to 110°F) • This product has a shelf life of 12 months	016628
QUAKER FORMULA® PURPLE PRO		015185

PACKAGING		
FIRE-RESISTANT HYDRUALIC FLUIDS	**GEAR LUBRICANTS**	**CLEANERS**
• Bulk • Totes • Drums • Pails	• Totes • Drums • Pails	• Totes • Drums • Pails
GREASES		
• Bulk • Totes • Drums	• Kegs • Pails • Tubes	

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