

CATALOG 2024



CARTEROIL

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Produced by



GATESTM
ENGINEERED LUBRICANTS

The Right Product,
For The Right Application



Aladdin 500 Series Metalworking Neat Oil

Aladdin 500 straight oil series is designed to meet todays tough fluid demands for multi metal work. Provides exceptional heat dispersion, extreme pressure performance, and high load bearing capabilities. Cleans machine surfaces and provides a clear view.

Aladdin 500 straight oil series can be used in all drilling, thread forming, turning and boring applications. Provides consistent finishes and extends tool life over conventional Chlorinated products. Available in a variety of viscosities and metal compatibilities to meet every customers' needs.

FEATURES and BENEFITS

- Has a very high operator acceptance rating
- Extends Tool Life
- Minimizes product carry off
- Will meet your most stringent cleaning requirements
- Provides great parts storage corrosion protection
- Does not Foam
- Has very low mist
- Contains no animal fat



Neat Oil
High Performance
Replaces Chlorinated Products
Gun Drilling / Ejector Drilling
Thread Rolling
Rotary Transfer
Swiss Machines / Screw Machines

Typicals				
	500/CSF/ CSFP	522CSF/CSFP	532CSF/CSFP	546CSF/CSFP
Viscosity	12	22	32	46
FLASH POINT	375° F	380° F	380° F	380° F
Ferrous Metals SS / Exotic Alloys	✓	✓	✓	✓
NON Ferrous metals	X ✓ ✓	X ✓ ✓	X ✓ ✓	X ✓ ✓
Active Sulfur	✓ X X	✓ X X	✓ X X	✓ X X
Drums and Totes	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓



Aladdin 4000 Series Metalworking Semi-Synthetic Coolant

- *Aladdin 4100* is a light to medium duty coolant designed for general purpose machining on ferrous and non-ferrous materials.
- *Aladdin 4100* provides extended tool life with predictable performance allowing the operator to reach their production threshold on a part per insert basis.
- The extreme pressure components of *Aladdin 4100* provides excellent hard water stability with extended indoor rust protection for inspection and processing, while protecting the machine tool and fixtures for bimetal corrosion protection.



METALWORKING
SEMI- SYNTHETIC COOLANT
CONCENTRATE

4100– Light Duty

4140– Medium Duty

Ferrous Metals

Non Ferrous Metals

Advantages of using Aladdin 4000 Series

Aladdin 4100

- Provides excellent anti-weld characteristics
- Provides excellent lubricity and wetting properties
- Does not contain chlorine, nitrites, phenols, active sulfur
- Anti-misting agent, improving air quality
- Light bodied fluid minimizing carry off and tackiness
- Less product transfer to work and packing tables
- Less product consumption

REFRACTOMETER READINGS									
PRODUCT	CONCENTRATION %	3%	4%	5%	6%	7%	8%	9%	10%
4100	Refractometer Reading	.9	1.2	1.5	1.8	2.5	3.2	3.9	4.5
4140	Refractometer Reading	.9	1.3	1.6	1.9	2.2	2.5	2.8	3.2

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The Right Product,
For The Right Application



Aladdin DWRP 360 Thin Film Rust Preventive

Aladdin DWRP360

THIN FILM RUST PREVENTIVE

DWRP360 is a solvent dispersed, all-purpose rust preventive formulated to displace water and provide excellent protection against rust and oxidation.

DWRP360 provides protection against fingerprints, dissimilar metals, and contact corrosion from dunnage and shipping wrappers.

DWRP360 dries to touch in 30 minutes and leaves a non oily slightly detectable film which does not interfere with typical gauging and inspection.

DWRP360 should be removed before coating, painting or plating with an alkaline cleaner or aromatic solvent.

Performance Benefits

DWRP360 is resistant to emulsification which allows for recycling and reuse with no detrimental effects of the corrosion protective properties. Large baskets of small components such as nuts and bolts can be processed without the fear of emulsification and short bath life.

DWRP360 covers approximately 4000 square feet per gallon, and is suitable for large surface areas such as sheet goods stacked and bundled and many other "In-Process" operations such as protection against flash rust on sand blasted large surfaces.

Precautions: The solvent used in DWRP360 is flammable and the usual fire precautions should be taken.

DWRP360 has protected ferrous and nonferrous parts for up to 1 year open atmosphere indoor storage (tests should be conducted for your specific application). **DWRP360** can be dipped, sprayed or brushed for even coating.

USE **DWRP360** WHERE;

- Rust protection is required during "IN-Process" manufacturing.
- Dewatering is required (after washing, vibratory de-bur, condensation removal, humidity control)

Produced by



Solvent based
Thin Film Rust Preventive
Provides up to 1 year
Indoor protection
Fingerprint suppressing

USES:

- For "IN-Process" manufacturing.
- Dewatering is required (after washing, vibratory de-bur, condensation removal, humidity control)

Typicals

Appearance	Light Brown
Specific Gravity	0.775
Flash Pt. F	>150
Protection	Up to 1 year indoors
Shelf Life	2 Years
Precautions	Flammable
Storage	Protect from Freezing
Drying time	30 minutes

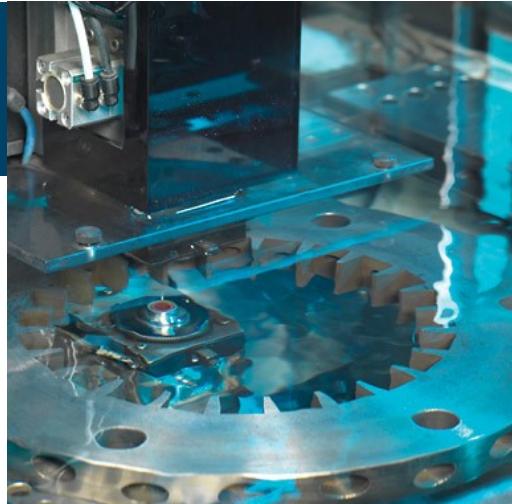


Aladdin EDM Dielectric Fluid

Aladdin EDM is a Group II base stock with anti oxidation and corrosion inhibitors for use in plunge and wire applications. Its resistance to oxidation will provide a long sump life of clear, clean operations.

Aladdin EDM Fluid is very competitively priced. Available in odorless and vanilla scented.

- ◊ Extended Fluid Life
- ◊ Water white, crystal clear allowing clear view of the work piece.
- ◊ Low viscosity allows quick run off and cleanability
- ◊ Odorless or vanilla scented
- ◊ Low viscosity allows particulates to fall from the work zone quickly to improve surface finish
- ◊ Reduces DC arcing
- ◊ Protects against “in process” rusting
- ◊ Suppresses fingerprints on finished parts.



Low Viscosity

Low Carry Out

**Provides in process
rust protection**

Fingerprint suppressing

USES: • Submerged EDM processes

Wire

Plunge

Profile

Typicals	
Appearance	



The Right Product,
For The Right Application



Aladdin ER AW

Energy Reducing / Anti Wear

Hydraulic Fluid



Aladdin ERAW is a zinc-based premium antiwear hydraulic fluid developed for both high and low pressure hydraulic systems for industrial and mobile applications. **Aladdin ERAW** exhibits excellent durability and proven retention of performance that extends fluid and equipment life. Our "Low Traction" formulation has reduced energy requirements up to 8.5% in documented field trials.

Benefits of Aladdin ERAW Fluids

- ◆ "Low Traction" fluids reduce energy required to maintain pressure and flow throughout the hydraulic system.
- ◆ Exceptional wear protection exceeds standard industry limits and extends the useful life of system components.
- ◆ Maximum seal protection saves money and simplifies maintenance by preventing loss of fluid through leaks.
- ◆ Outstanding oxidative and thermal stability allows use in the harshest operating conditions while extending drain intervals.
- ◆ Reduce varnish and sticking control valves

Aladdin ER AW

Field Trials demonstrate proven performance ensuring confidence and peace of mind.

Reduce energy costs as much as 8.5%

Extend Drain intervals and reduce varnish built up.

It all adds up to increased production!

OEM Approvals

- ◆ Bosch Rexroth RDE-90235
- ◆ Eaton Brochure 03-401-2010
- ◆ Eaton Lubricant Specification E-FDGN-TB002-E
- ◆ JCMAS HK P041
- ◆ Parker Denison HF-1, HF-2, HF-0

Meets or Exceeds:

- ◆ ASTM D6158
HL, HM, HV, HMHP, HVHP
- ◆ Danieli 0.000.001 Type 10 & 11
- ◆ DIN 51524
Part 1 HL, Part 2 HLP, Part 3 HVLP
- ◆ Eaton Vickers I-286-S, M-2950-S
- ◆ Fives Cincinnati P-68 / 69 / 70
- ◆ GM LS-2 Antiwear Hydraulic Oil
- ◆ Swedish Standard SS155434:2015

Typicals			
	32	46	68
Viscosity @ 40°C	32 5.74	46 8.24	68 10.9
FLASH POINT °C	242	279	278
Air Release, Min. D3427	0	2	5
Noack Volatility % Loss	0	0.8	.3
Conradson Carbon Residue D189	0	0	0



Aladdin ER AW Case Study Field Trial Results



Improving Efficiency of Plastic Injection Molding Machines

Background:

The Plastic Injection Molding Machine (PIMM) is used in the process of manufacturing plastic components. PIMMs rely heavily on energy, with electricity powering the various hydraulic systems used to actuate the machine. To avoid costly downtime, selecting a hydraulic fluid that both optimizes the performance of the machine and protects against the damage of key components is essential.

Traditional mono-grade fluids have been the preferred choice for operators in the plastic injection molding industry. Today's increasingly competitive market and the drive to minimize environmental impacts from manufacturing operations has led to the development of more efficient and sustainable options.

As PIMM designs evolve, hydraulic performance demands are increasing due to precision high speed controls, smaller reservoirs and higher operating temperatures.

Upgrading to a "Low Traction" fluid will increase production at a lower operating cost decreasing maintenance and consuming less energy. Each step toward higher efficiency puts parts and money back on the table.

Real-World Testing

Gates Engineered Lubricants

Aladdin ER AW formula was tested in real-world production collecting data from 50 channels. The PIMM was operated with a reference hydraulic fluid before and after the candidate to ensure there was no change in the performance of the machine other than changing the hydraulic fluid.

Aladdin ER AW 46 went head to head against a standard ISO46 mono-grade measuring PIMM performance as it produced 48,000 units collecting 2.4 million data points.

Energy consumption quickly became the major focus, as the data rolled in. The following graph reflects the lower cost of operation Aladdin ER AW fluids can have on your operation.

Up to 8.5% Efficiency Improvement



As shown in the graph, the 8.5% efficiency improvement achieved by changing to Aladdin ER AW energy reduction fluid equates to an annual electricity cost savings of \$98,000 for a factory of ten plastic injection molding machines. This efficiency improvement equates to lower cost of operations, productivity and sustainability of your operation.



Aladdin Grinding Oil G512 Metalworking Neat Oil

Aladdin Grinding Oil G512 is a blend of group II base oils and additives designed to prevent welding and galling between the workpiece and the honing / grinding tool.

The use of Group II base oils allow Gates Engineered Lubricants to be used indefinitely in the machining operation without the need to dump and recharge. Replenishing sump volume losses will fortify your coolant sump and keep it performing as new oil for years to come. The second step to extended coolant life is a good filtration program.

Aladdin Grinding Oil G512 keeps the abrasive clean and delivers maximum cutting rates extending the life of the abrasive including CBN.

Aladdin Grinding Oil G512 provides unmatched cooling and anti-weld characteristics for all steels and most stainless steels and other exotic high tensile strength alloys such as :

Inconel, Hastalloy, Monel and Titanium.

Aladdin Grinding Oil G512 is chlorine free and available in "Active Sulfur, and Sulfur Free formulations.

The lower viscosity of Aladdin G512 provides:

- Excellent lubricity and wetting properties
- Low viscosity to minimize carry off and accelerate fines and swarf separation
- Provides excellent anti-weld characteristics
- Less product transfer to work and packing tables
- Less product consumption
- May be filtered to 1 micron

Produced by



Neat Oil
High Performance
Replaces Chlorinated Products

Typicals	
	G512
Viscosity	12
FLASH POINT	375° F
Ferrous Metals SS / Exotic Alloys	✓
NON Ferrous metals	X ✓
Active Sulfur	✓ X
Drums and Totes	✓ ✓



Aladdin MULTI-FUNCTION AW HYDRAULIC FLUID SERIES

Aladdin MULTI FUNCTION Hydraulic Fluid series is an ash-less, Zinc Free multi-functional industrial fluid for slideway, bearings, gears and hydraulic oil applications.

This product offers excellent

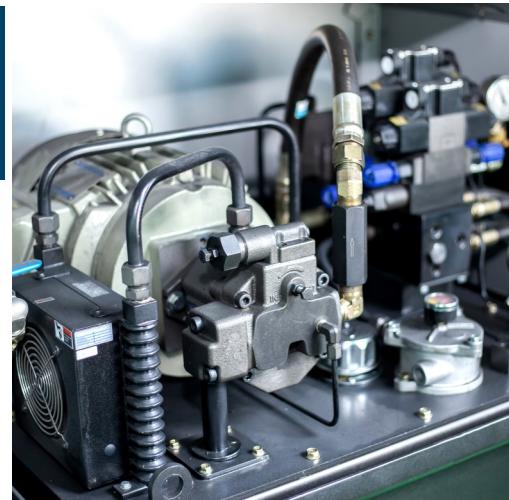
- Demulsibility
- Oxidation stability
- Rust protection
- Lubricity
- Extreme pressure
- Anti-wear properties
- No Foam Formulation

Benefits of Aladdin Multi-Function AW Hydraulic Fluids

- Lowers inventory costs with single use fluids
- Ensures compatibility of fluids where cross contamination may occur
- Protects rotating components with anti-wear, rust and corrosion film

Meets or exceeds the OEM specifications

- | | | |
|--|---|---|
| ◆ <u>Industrial Lubricant Specifications</u> | ◆ David Brown S1.53.101 | ◆ DIN51517-3 CLP |
| ◆ Danieli .001 Type 21 | ◆ Fives Cincinnati EP Gear Oil | ◆ <u>Excellent Results in the following evaluations</u> |
| ◆ Cincinnati Lamb P-47 | ◆ US Steel 224 | ◆ Bijur Filtration Testing |
| ◆ Morgan No Twist Rod Mill | ◆ <u>Hydraulic and Industrial Gear Oils</u> | ◆ SKC Coolant Separability |
| ◆ AGMA 9005-F16 AS | ◆ DIN51524-2 HLP | |



ALADDIN MFAW HYDRAULIC FLUID

ZINC FREE FORMULATION

Surpasses OEM Requirements

Typicals						
	32	46	68	100	150	220
Viscosity @ 40°C / 100°F	32 5.44	46 6.82	68 8.77	100 10.9	150 14.5	220 18.7
FLASH POINT °C / °F	210 411	215 419	226 110	237 458	255 491	235 455
SPECIFIC GRAVITY	.865	.869	.874	.879	.880	.881
COLOR	GOLDEN	GOLDEN	GOLDEN	GOLDEN	GOLDEN	GOLDEN
Sulfur/ Phosphorus Zinc	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO



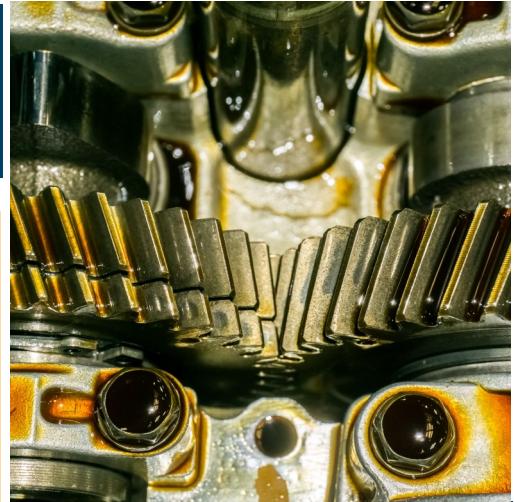
Aladdin Premium IGO Series

Aladdin Premium Industrial Gear Oil series provides the best Micro-Pitting protection on the market. It exceeds major branded products on the FE-8 D51819 test.

(PROOF !!) 80-hour test to pass / Aladdin Premium IGO ran 160 hours with less wear and Micro-Pitting than the 80-hour benchmark set by a global leader in gear oil supply. Ask for a copy of the test report!

FEATURES and BENEFITS

- Ultra high extreme pressure protection (17,984 lbf)
- Exceptional Micro-Pitting Performance (FVA54 Test)
- Superior Thermal Stability resisting sludge buildup
- Lowers Gear Box Temperatures
- Expertly handles Shock / Heavy loading (stage 14 of FZG)
- Extends oil life cycle
- Continuous duty applications



ALADDIN PREMIUM Industrial Gear Oils

MATCHLESS WORLD CLASS
PERFORMANCE

Surpasses OEM Requirements

Meets or exceeds the OEM specifications for:

AGMA
DIN
Flender
Chinese GB

US Steel
Danieli
David Brown
Indian STD

Schuler Pressen
SMS Group
GM LS2 EP
Schaeffler FAG

Renk ZAN
Sumitomo Drive
ZF TE ML 04H

ZF Industrieant-
riebe Witten ZFN-
W 17-145

Typicals					
	IGO 100	IGO 150	IGO 220	IGO 320	IGO 460
Viscosity @ 40°C / 100°F	99.7 10.9	154.4 21.2	225.2 28.7	325.8 38	463.4 51.3
FLASH POINT °C	237	255	237	254	240
SPECIFIC GRAVITY	.879	.886	.887	.894	.896
COLOR	GOLDEN	GOLDEN	GOLDEN	DARK GOLDEN	GOLDEN BROWN
FZG PASS LOAD STAGE	14	14	14	14	14



GATES™
ENGINEERED LUBRICANTS

The Right Product,
For The Right Application

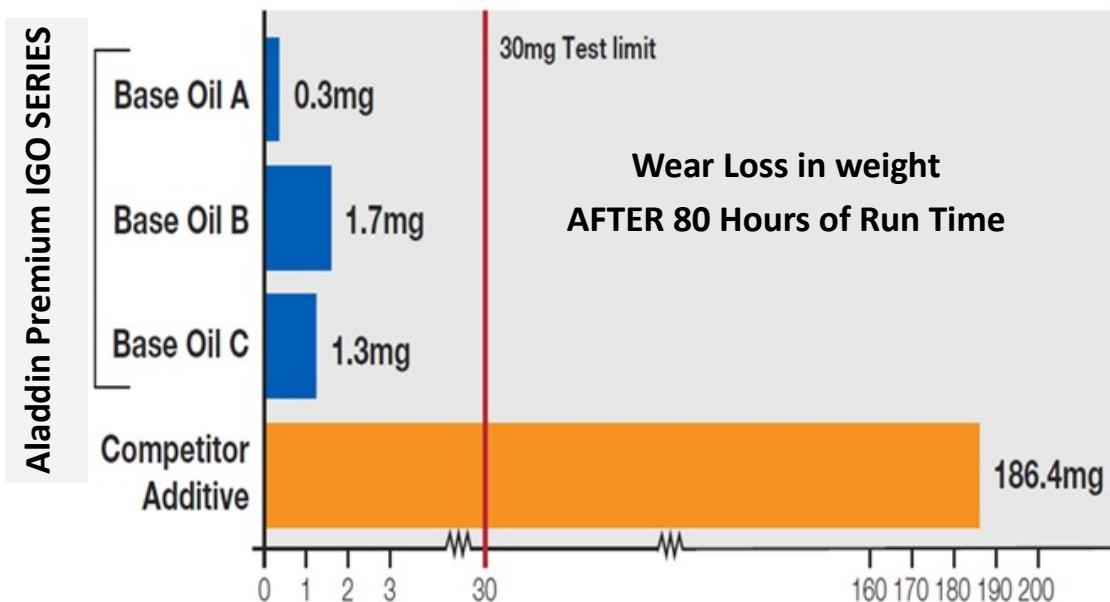
Aladdin Premium IGO Series

Aladdin Premium Industrial Gear Oil provides the best Micro-Pitting protection on the market.
It exceeds major branded products on the FE-8 D51819 test.

FE-8 Bearing test requirement per D51819

- Test Bearing: FAG 81212
- Shaft Speed: 7.5 rpm
- Temperature: 80C
- Loading: 80 kN (17984 lbf) (Siemens Specification)

We ran the test for the normal 80 hours and then let it keep going until 160 hours





Aladdin R&O Series Premium Turbine / R&O Fluids

Aladdin R &O is a rust and oxidation inhibited industrial oil with ashless wear protection additives.

Aladdin R&O is recommended for use in a variety of systems which require rust and oxidation inhibited lubricating oils.

Aladdin R&O is formulated for turbines, general purpose lubrication, air tools, air compressors, steam turbines, Low pressure hydraulic systems, circulation oil systems, oil filled couplings, centrifugal pumps and lightly loaded gearboxes.

Advantages

This product offers excellent

- Demulsibility
- Oxidation stability
- Rust protection

• Eliminates Varnish Deposits

- Extreme pressure
- Anti-wear properties
- No Foam Formulation

Meets or exceeds these OEM specifications

- ◆ [Siemens TLV901304](#)
- ◆ [General Electric GEK 32568F](#)
- ◆ [DIN 51515](#)
- ◆ [Alstom HTGD 90117](#)
- ◆ [Solar Turbines ES 9-224](#)

Typicals

	32	46	68	100	150	220
Viscosity @ 40°C	32	46	68	100	150	220
FLASH POINT °C / °F	210 411	215 419	226 110	237 458	255 491	235 455
SPECIFIC GRAVITY	.832	.844	.844	.886	.883	.891
Viscosity Index	100	105	105	110	108	110
Sulfur/ Phosphorus Zinc	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO



Aladdin R&O Series Premium Turbine / R&O Fluids

Aladdin R &O is a rust and oxidation inhibited industrial oil with ashless wear protection additives.

Aladdin R&O is recommended for use in a variety of systems which require rust and oxidation inhibited lubricating oils.

Aladdin R&O is formulated for turbines, general purpose lubrication, air tools, air compressors, steam turbines, Low pressure hydraulic systems, circulation oil systems, oil filled couplings, centrifugal pumps and lightly loaded gearboxes.

Advantages

This product offers excellent

- Demulsibility
- Oxidation stability
- Rust protection
- Eliminates Varnish Deposits
- Extreme pressure
- Anti-wear properties
- No Foam Formulation

ALADDIN R&O and TURBINE

ZINC FREE FORMULATION

Surpasses OEM Requirements

Meets or exceeds these OEM specifications

- ◆ [Siemens TLV901304](#)
- ◆ [General Electric GEK 32568F](#)
- ◆ [DIN 51515](#)
- ◆ [Alstom HTGD 90117](#)
- ◆ [Solar Turbines ES 9-224](#)

Typicals						
	32	46	68	100	150	220
Viscosity @ 40°C	32	46	68	100	150	220
FLASH POINT °C / °F	210 411	215 419	226 110	237 458	255 491	235 455
SPECIFIC GRAVITY	.832	.844	.844	.886	.883	.891
Viscosity Index	100	105	105	110	108	110
Sulfur/ Phosphorus Zinc	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO



Aladdin RP 210 Light Oil Film Rust Preventive

Aladdin RP 210

Light Oil FILM RUST PREVENTIVE

RP 210 is an oil dispersed, all-purpose rust preventive formulated to displace water and provide excellent protection against rust and oxidation.

RP 210 provides protection against fingerprints, dissimilar metals, and contact corrosion from dunnage and shipping wrappers.

RP 210 does not completely dry and leaves a light oily film which protects against direct moisture contact.

RP 210 should be removed before coating, painting or plating with an alkaline cleaner or aromatic solvent.

Performance Benefits

RP 210 is resistant to emulsification which allows for recycling and reuse with no detrimental effects of the corrosion protective properties. Large baskets of small components such as nuts and bolts can be processed without the fear of emulsification and short bath life.

RP 210 covers approximately 2500 square feet per gallon, and is suitable for large surface areas such as sheet goods and tubes stacked and bundled.

Precautions: The low viscosity oil used in **RP 210** can cause work areas to become very slippery, caution should be taken to keep walk areas clean and dry.

RP 210 has protected ferrous and nonferrous parts for up to 1 year open atmosphere indoor storage (tests should be conducted for your specific application). **RP 210** can be dipped, sprayed or brushed for even coating.

USE **RP 210** WHERE;

- Rust protection is required during "IN-Process" manufacturing.
- Dewatering is required (after washing, vibratory de-bur, condensation removal, humidity control)



**Light Oil based
Thin Film Rust Preventive
Provides up to 1 year
Indoor protection
Fingerprint suppressing**

USES: • For "IN-Process" manufacturing.
• Dewatering is required (after washing, vibratory de-bur, condensation removal, humidity control)

Typicals

Appearance	Light Brown
Specific Gravity	0.825
Flash Pt. C/F	181 / 358
Protection	Up to 1 year indoors
Viscosity @ 40 C	10.6 cSt
Precautions	Avoid vapors
Storage	Protect from Freezing
Drying time	Never completely dries



Aladdin Slideway Series

Aladdin Slideway series provides a unique combination of exceptional frictional characteristics with high extreme pressure performance capability. These products do no contain phosphorus, this will lessen negative interactions with coolant and help extend metalworking fluid life.

FEATURES and BENEFITS

- Ashless, clear technology
- Strong demulsibility and water separation
- Exceptional metalworking fluid interaction
- Passes stringent filtration
- Free of phosphorus
- High stick slip performance
- Continuous duty applications



ALADDIN Slideway

**MATCHLESS WORLD CLASS
PERFORMANCE**

Surpasses OEM Requirements

Meets or Exceeds Industry Standards:

Cincinnati P-47

GM LS-2

Typicals			
	Clear Slideway 32	Clear Slideway 68	Slideway 220
Viscosity @ 40°C	32	68	220
FLASH POINT °C	237	255	237
SPECIFIC GRAVITY	.840	.848	.868
COLOR	Clear	Clear	Amber
Phosphorus / Sulfur	None	None	None



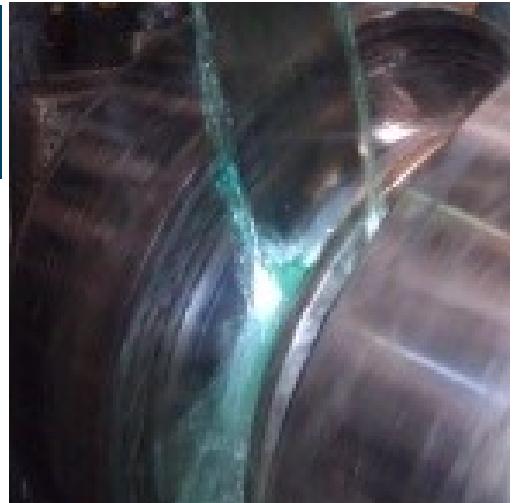
Aladdin Syn-Tube 3100 Full Synthetic Tube Mill Coolant

Aladdin Syn-Tube 3100 is a clear blue-green, oil rejecting, synthetic tube forming fluid. It provides excellent rust protection and carries detergency properties to keep rollers and tubes free of buildup and oily films

Aladdin Syn-Tube 3100 is hard water stable. Regular system make up and tramp oil removal will allow the coolant to remain in use for an unlimited time.

Aladdin Syn-Tube 3100 provides excellent indoor rust protection and protects against surface rust and contact point rust stains during storage.

- Advantages of using Trinity Cool 716
- 30% less usage compared to traditional technology
- Low residues on tubes, minimizing carry off
- Excellent sump life, less maintenance required
- Superior corrosion protection on ferrous and nonferrous alloys
- Completely rejects tramp oil



Syn-Tube 3100
Chlorine and Sulphur free
Runs Clean
Environmentally friendly
Anti-Misting agent, improving air quality
Minimal BOD / COD issues
NO Foam

Specific Gravity	1.04
pH @ 5%	9.0-9.5
Color	Light amber
Transparent	
Rust Test 35:1	No Rust
Falex Test 35:1	3750/40
Chlorine	NO

REFRACTOMETER READINGS									
PRODUCT	CONCENTRATION %	3%	4%	5%	6%	7%	8%	9%	10%
Syn-Tube 3100	Refractometer Reading	.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0



Aladdin 300 Series Metalworking Neat Oil

Aladdin 300 straight oil series is designed to meet todays tough fluid demands for multi metal work. Provides exceptional heat dispersion, extreme pressure performance, and high load bearing capabilities.

Aladdin 300 straight oil series is offered in a variety of viscosities and metal compatibilities to meet every customers' needs. Chlorine and Fat free. Cleaner machine tools, parts and less drag out.

FEATURES and BENEFITS

- Has a very high operator acceptance rating
- Minimizes product carry off
- Will meet your most stringent cleaning requirements
- Provides great parts storage corrosion protection
- Does not Foam
- Has very low mist



Neat Oil

Replaces Chlorinated Products
Gun Drilling / Ejector Drilling
Landis Threaders
Swiss Machines
Screw Machines

Typicals						
	300/CSF/ CSFP	322/CSF/CSFP	332/CSF/CSFP	346/CSF/ CSFP	311	334
Viscosity	12	22	32	46	22	17
FLASH POINT	375° F	380° F	380° F	380° F	380° F	375° F
Ferrous Metals Stainless Steel	✓	✓	✓	✓	✓	✓
NON Ferrous metals	X ✓ ✓	X ✓ ✓	X ✓ ✓	X ✓ ✓	X	X
Active Sulfur	✓ X X	✓ X X	✓ X X	✓ X X	✓	✓
Drums and Totes	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓	✓



Aladdin 3300 Premium Water Soluble Cutting Oil

Aladdin 3300 is a premium micro emulsion water soluble metalworking fluid for use in all materials. It is a heavy duty, extreme pressure emulsifiable oil that is suited for the most difficult of operations such as broaching, tapping, forming or stamping. It is able to provide great flexibility to most shops because of its extremely high anti-welding additive level.

Aladdin 3300 is truly a unique, high technology coolant designed for maximum performance. Its special biocide package provides maximum tan life. This product has a good emulsion stability in all water conditions, outstanding extreme pressure characteristics, good operator acceptance, and gentleness on the skin.

Aladdin 3300

- ◆ Provides excellent lubricity and wetting properties
- ◆ Provides excellent anti-weld characteristics
- ◆ Anti-misting agent to improve air quality
- ◆ Customer Rating A++
- ◆ Rust Protection
- ◆ Residual Fiol on Machine Tools and Parts
- ◆ Resistance to Biological Degradation
- ◆ Operator Acceptance



**Micro Emulsion Soluble Oil
Heavy Duty
Severe Applications
All Materials
Check for Aluminum Staining
Contains active Sulfur
Chlorine Free
Fat Free**

Typicals

pH @ 5% Conc.	9.8-10.5
Chlorine / Animal Fat	No
Ferrous Metals SS / Exotic Alloys	✓
NON Ferrous metals	X
Active Sulfur	✓
Totes / Drums / Pails	✓
Foam Characteristics	5 second Break

Operating Concentrations

Refractive Index = 1:1

Sawing, Deep Hole Drilling, Tapping Broaching	10%
Roughing OD / ID, Exotic Materials, Milling	5%-8%
High Speed Turning (700 SFPM)	3%



Aladdin Hone Oil Series Premium Chlorine Free Honing Oil



Aladdin Hone Oil

PREMIUM MINERAL OIL BASED HONING FLUID

Aladdin Hone Oil is a blend of group II base oils and additives designed to prevent welding and galling between the workpiece and the honing stones.

Aladdin Hone Oil does not contain any chlorine or animal fats and is therefore easily cleaned and resists rancid foul odors in the sump.

Aladdin Hone Oil keeps the abrasive clean and delivers maximum cutting rates with less pressure and lower temperatures, extending the life of the abrasive.

Aladdin Hone Oil provides adequate cooling and anti-weld characteristics for all steels and most stainless steels and other exotic high tensile strength alloys.

FEATURES and BENEFITS

- Provides excellent lubricity and wetting properties
- Provides excellent anti-weld characteristics
- Anti-misting agent, improving air quality
- Less product transfer to work and packing tables
- Less product consumption

Premium Mineral Oil based
Honing Fluid

Fine Finishes
Faster Cutting
Lower Pressures
Less Heat build up
Cleaner Parts

Typicals			
	Hone Oil 100	Hone Oil 150	Hone Oil 220
Viscosity @ 40°C	22	32	68
FLASH POINT °C	237	255	237
SPECIFIC GRAVITY	.775	7.80	779
COLOR	Amber	Amber	Dark Amber
Phosphorus / Sulfur	0 / 4%	0 / 4%	0 / 5%



Aladdin RP 1080 Thixotropic Rust Preventive

Aladdin RP 1080 is an oil-dispersed, thixotropic, all-purpose rust preventive formulated to provide excellent protection against rust and oxidation. **Aladdin RP 1080** has the ability to become fluid with agitation enabling the residual film to be self-healing providing a semi-permanent protective coating.

KEY PERFORMANCE BENEFITS

Aladdin RP 1080 has protected ferrous and nonferrous parts for up to 5 years in indoor storage and 2-3 years stored outdoors under certain conditions. (tests should be conducted for your specific application).

Aladdin RP 1080 can be sprayed or brushed for even coating of the surfaces. Once on the surface of the part, **Aladdin RP 1080** becomes semi solid reducing drips and runoff.

Aladdin RP 1080 has superior clean-ability – the film remains wet and never dries, it can be easily removed with a wiping cloth, squidgy or an alkaline cleaner such as Super Clean.

USE RP 1080 WHERE;

- Parts could be exposed to salt spray environments.
- When parts will be subjected to long term storage or transportation.
- When maximum protection is required against corrosion.
- When protection of part is needed for overseas shipment.
- **Aladdin RP 1080** should be applied undiluted for maximum protection. The product can be applied by airless spray or dip. When dipping, the tank should be heated to 130F, agitated so the

Aladdin RP 1080 becomes fluid and completely coats all



Long Term Corrosion Protection
Never Dries
Never Hardens
Removable

Typicals	
Appearance of Fluid	Tan or Blue
Odor	Trace of Petroleum
Viscosity cSt @ 40c	Semi Solid (Pumpable)
Pour Pt C	150 F
Specific Gravity	.880—.890
Flash Point	>220 c
Rust Protection	Up to 5 years outdoors
Coverage	400 SQ FT / Gallon

Produced by



The Right Product,
For The Right Application



www.carteroilusa.com
sales@carteroilusa.com

Aladdin Spindle Oil Series

Aladdin Premium Spindle OIL is a rust and oxidation inhibited industrial oil with ashless wear protection additives.

Aladdin Premium Spindle OIL is blended from the highest quality group II base stocks for longer life and stable viscosity control.

Aladdin Premium Spindle OIL resists oxidation and protects bearings from rust and corrosion caused by water ingress.

Aladdin Premium Spindle OIL provides excellent wear protection for high speed bearings, bushings and sleeves found in precision high speed spindles.

Aladdin Premium Spindle OILs are clear, light bodied oils for better wetting and penetration

Benefits of Aladdin Spindle Oils

- Excellent foam control
- Excellent hydrolytic stability
- Excellent oxidative stability
- Excellent rust protection
- Excellent thermal stability
- Excellent wear protection
- Good non-ferrous metal corrosion protection



ALADDIN Spindle Oil

MATCHLESS WORLD CLASS
PERFORMANCE

Surpasses OEM Requirements

Produced by



The Right Product,
For The Right Application

	Spindle Oil 2	Spindle Oil 10	Spindle Oil 22
Viscosity @ 40°C	2	10	22
FLASH POINT °C	84	168	171
SPECIFIC GRAVITY	.801	.853	.856
COLOR	Clear	Clear	Clear



The Right Product,
For The Right Application



Trinity Air PG Rotary Screw Compressors

Trinity Air series compressor lubricants are formulated using a premium PAG synthetic base fluid coupled with an unparalleled high performance add pack. Meets or exceeds specifications for high speed bearings, turbines, and R&O applications.

This product offers excellent

- Demulsibility
- Oxidation stability
- Excellent Lubricity
- High Viscosity Index
- Low Volatility

Benefits of Trinity Air PG

- Lower maintenance and top offs
- Longer drain intervals
- Can be run up to 8,000 to 10,000 hours annually
- High Viscosity Index
- Harsh chemical and coastal environments
- Wide temperature ranges



Trinity Air PG

Rotary Screw Compressor

8,000 to 10,000 Hours

PAG Base Stock

Typicals		
	32	46
Viscosity @ 40°C / 100C	42.03 7.73	50.96 9.08
FLASH POINT °C	258	279
Air Release, Min. D3427	0.9	1
Rust Test	PASS	PASS
Copper Strip	1A	1A



Trinity Air Rotary Screw Air Compressor Lubricant Series

Trinity Air series compressor lubricants are formulated using a premium PAO synthetic base fluid coupled with an unparalleled high performance add pack. Meets or exceeds specifications for high speed bearings, turbines, and R&O applications.

This product offers excellent

- Demulsibility
- Oxidation stability
- Rust protection
- NO-Coking performance
- Anti-wear properties
- No Foam Formulation

Benefits of Trinity Air

- Lower maintenance and top offs
- Longer drain intervals
- Can be run up to 6,000-8,000 hours annually

Meets or exceeds the OEM specifications for:

- ◆ ISO 6743-3A
- ◆ DAB
- ◆ DAJ



Trinity Air
Rotary Screw Compressor
6,000 to 8,000 Hours
PAO Synthetic Base

Typicals			
	32	46	68
Viscosity @ 40°C / 100C	32 5.74	46 8.24	68 10.9
FLASH POINT °C	242	279	278
Air Release, Min. D3427	0	2	5
Noack Volatility % Loss	0	0.8	.3
Conradson Carbon Residue D189	0	0	0



TRINITY COOL 730G Metalworking Semi-Synthetic Coolant

TRINITY COOL 730G is a premium, micro emulsion is a semi-synthetic coolant designed for machining and grinding. Our newest technology allows for extended sump life and excellent foam control versus former generations of coolants.

Trinity Cool 730G maintains a unique blend of Extreme Pressure additives that will exceed your performance expectations on stainless steel, carbon steel, and aluminum. This product series is designed for Job Shops, Fabrication Shops and High Production Manufacturing environments. Very High operator acceptance rating.

Advantages of using Trinity Cool 730G

- 40% less usage compared to traditional technology
- Low residues on parts, minimizing carry off
- Excellent sump life, less maintenance required
- Superior corrosion protection on ferrous and nonferrous alloys
- Formulated for high pressure systems up to 1,200 psi in soft water
- Able to push feeds and speeds to the limit in high removal rate applications
- Completely rejects tramp oil
- Does not contain chlorine, phenols, nitrates, sulfur, or DCHA



Semi Synthetic Water Dilutable Concentrate

Grinding 4-6 %

Turning 5- 8%

Milling 6-8%

Drilling 5-7%

Sawing 7-10%

Medium- Heavy Duty Machining

For High Tensile Strength alloys, add 1% to the concentration ratios above.

Cast or Ductal Iron

Carbon Steel

Stainless Steel

Exotics

Aluminum

Brass

REFRACTOMETER READINGS

PRODUCT	CONCENTRATION %	3%	4%	5%	6%	7%	8%	9%	10%
730G	Refractometer Reading	3	4	5	6	7	8	9	10

Produced by



The Right Product,
For The Right Application



Trinity Synthetic IGO Series

Trinity Synthetic Gear Oil series provides the best Micro-Pitting protection on the market. It exceeds all mineral oil based, major branded products on the FE-8 D51819 test.

(PROOF) 80-hour test to pass / Trinity Synthetic IGO ran 160 hours with less wear and Micro-Pitting than the 80-hour benchmark set by a global leader in gear oil supply.



FEATURES and BENEFITS

- Ultra high extreme pressure protection (17,984 lbf)
- Exceptional Micro-Pitting Performance (FVA54 Test)
- Superior Thermal Stability resisting sludge buildup
- Lowers Gear Box Temperatures
- Expertly handles Shock / Heavy loading (stage 14 of FZG)

Trinity Synthetic Industrial Gear Oils

MATCHLESS WORLD CLASS PERFORMANCE

Surpasses OEM Requirements

AGMA 9005-F16 AS

Chinese GB 5903 L-CKC / L-CKD

Danieli 0.000.001 CKC

David Brown S1.53.101 Type E

DIN 51517 Part 1, 2 & 3

Fives Cincinnati EP Gear Oil Lubricants

Flender GmbH

GM LS 2 EP Gear Oil

Indian Standard IS 8406

ISO 12925-1 CKC, CKD, CKSMP

Renk 36011-11

Schaeffler Step 1 to 4

Schuler Pressem GmbH (Muellar Weingarten) DT 55 005/1

SMS Group SN180-3

Sumitomo Drive Technologies (Hansen Industrial Transmissions) BUITEC-2009-4-001 H

U.S. Steel 224

ZF TE ML 04H

Z Witten ZN-W-17-145 (except travel gears)

Typicals						
	IGO S 46	IGO S 68	IGO S 150	IGO S 220	IGO S 320	IGO S 460
Viscosity @ 40°	45.6	69.9	155.7	216.5	329.5	451.2
VI	162	166	166	172	175	180
FZG PASS LOAD STAGE	14	14	14	14	14	14



Trinity NGEO Performance Plus 40 Low Ash

Trinity NGEO Performance "Plus" is formulated for:

- Long life and extended drain intervals used in high BMEP stationary gas engines.
- Protects against deposits and sludge formation
- Formulation is tailored to the higher temperatures and outputs of more modern stationary natural gas engines.



Trinity NGEO Performance "Plus"

- Antioxidant performance improves oil life and enables extended drain intervals of (2000 - 4000+ hrs).

Trinity NGEO Performance "Plus"

- Hyper-ZDDP chemistry delivers measurable wear protection and guards against equipment failure while lowering the overall cost of ownership.

Trinity NGEO Performance "Plus" has

"Proven Performance" passing OEM field trials lubricating:

- Caterpillar G3612 field test report # PAP 531 2012 SG
- Waukesha F3521 field test report # PAP 375 2014 SG

Meets or exceeds the OEM specifications for:

- | | |
|---------------|-------------------------|
| ◆ Caterpillar | ◆ Cummins |
| ◆ Waukesha | ◆ Man Diesel & Turbo 4T |
| ◆ Jenbacher | ◆ Guascor |
| ◆ MWM | ◆ MTU |

Gates Engineered Lubricants offers
"State of the Art"

Oil Condition Monitoring offered
through a third party lab.

- Free Monthly Testing

- Prepaid Sample Shipping
- Trend Analysis and History
- Sample Management Training
- Asset Performance Comparison
- Cloud base reporting

Engine Oil
Stationary Natural Gas Fueled
For use in Harsh conditions
including Landfill gas

Typicals		
Test Method	Chemical Identity	Test Result
ICP	Boron ppm	76
	CALCIUM ppm	1309
	PHOSPHORUS ppm	307
	SULFUR ppm	1450
	TITANIUM ppm	32
	ZINC ppm	318
D445 @ 40°C	VISCOSITY	127.4
D455 @ 100° C	VISCOSITY	13.7
VI	VISCOSITY INDEX	104
D2896	TBN mg KOH/g	6.5
D874	SULFATED ASH % wt	0.5
	Flash Point	254°C/ 490°F
	Specific Gravity	.884



Aladdin WindForce Wind Turbine Gear Oils

Aladdin WindForce gear oils are premium full-synthetic world class gear oils formulated with unique additive chemistries to protect against micropitting and scoring to meet the challenges of wind turbine severe duty operations.



Our "State of the Art" Extreme Pressure / AntiWear system is the backbone of the WindForce Series, delivering unsurpassed boundary lubrication performance to both gears and bearings.

Benefits of WindForce

- EP Performance
- Micropitting Resistance
- Good Demulsibility

- Foam Control Thermal and Oxidative Stability
- Corrosion Protection
- Anti-Wear Protection

**Superior Anti-Seizure Performance
Maximum Gear Protection
Optimum Water Separation
Minimizes deposits
Reduced Down Time
Matchless World Class Performance**

		220	320	460	680
Viscosity @ 40°C / 100C	D445	216.5 28.2	330.7 40.28	451.9 57.89	687.2 73.02
Viscosity Index	D2270	170	175	179	185
Density	D4052	.8432	.8454	.8470	.8485
Flash and Fire Point °C	D92	229	237	235	231
Pour Point °C	D5950	-51	-42	-42	-36
Foam Tendency, mL Sequence I / II / III	D892	0/0, 0/0, 0/0	0/0, 0/0, 0/0	0/0, 0/0, 0/0	0/0, 0/0, 0/0

Meets or exceeds the OEM specifications for:

AGMA
DIN
Flender
Chinese GB

US Steel
Danieli
David Brown
Indian STD

Schuler Pressen
SMS Group
GM LS2 EP
Schaeffler FAG

Renk ZAN
Sumitomo Drive
ZF TE ML 04H

ZF Industrieant-
riebe Witten ZFN-
W 17-145