

uridongne co., ltd.

Industrial Lubricants

uridongne co.,. ltd.

Lubricant Research Institute

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Company History

✚ Company Introduction

1989 Ideuk lubricant establishment

2000 Conversion by ideuk co., ltd.

2006 Uridongne co., ltd. establishment

✚ Technical development(R&D)

Low evaporation loss compressor oil composition is excellent lubrication properties (patent : 0742084)

Nano silver metal colloidal addition composition of water-soluble cutting oil (Patent : 0418258)

Excellent low pour point lubricating properties are shared components mist (Patent : 0803923)

Hydraulic oil and slide-way fluid and water-solubility metal-working fluid (Patent : 0439663)

Oilless bearing lubricating oil composition used in the (Patent : 0443826)

✚ Lubricants Research

1998 Lubricants Research Institute



Manufactured products

- General Purpose Oil (White Mineral Oil)

- HP – 080,
- HS – 080, 320, 680, 960,
- HU – S20, S30, S40, S60, S80,
- HY – L30, 030, 040, 060, 080,

- Liquid Paraffin

- UDP – 80L, 200, 310, 680, 960, 30L, 40L, 60L,

- Machine Oil

- Mineral Oil Type : LAC 2, 3, 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320, 460
- Synthetic Oil Type : LAC SYN 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320,
LAC DE 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320,
LAC PE 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320,

- Bearing Oil

- Mineral Oil Type : Bearing 2, 3, 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320, 460
- Synthetic Oil Type : Bearing SYN 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320,
Bearing DE 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320
Bearing PE 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320

* SYN : Polyalphaolefin(PAO), DE : Ester, PE : PAO/Ester, HF : Polyalkylene glycol(PAG),



Manufactured products

- Hydraulic Oil

- Mineral Oil Type : Dalrija HV 22, 32, 46, 68, 100
- Synthetic Oil Type :
 - Polyalphaolefins Hydraulic Oil : Dalrija Syn 32, 46, 68, 100
 - Ester Basestock Hydraulic Oil : Dalrija DE 32, 46, 68, 100
 - Polyalphaolefins & Ester Basestock Hydraulic Oil : Dalrija PE 32, 46, 68, 100
 - Incombustibility Hydraulic Oil : Dalrija HFs 46

- Compressor Oil

- Mineral Oil Type : Comp 32, 46, 68, 100
- Synthetic Oil Type : Comp SYN 1032, 1046, 1068, 1100
Comp DE 2032, 2046, 2068, 2100
Comp PE 3032, 3046, 3068, 3100

- Refrigerating Machine Oil

- Synthetic Oil Type : HI Freeze Syn 22, 32, 46, 68, 100
HI Freeze DE 22, 32, 46, 68, 100
HI Freeze PE 22, 32, 46, 68, 100

* SYN : Polyalphaolefin(PAO), DE : Ester, PE : PAO/Ester, HF : Polyalkylene glycol(PAG),



Manufactured products

- Vacuum Pump Oils

- Mineral Oil Type : EM 150, 350, 300
- Synthetic Oil Type : EM SYN 500

- Heat Transfer Oil

- Mineral Oil Type : THERM 1010, 1350, 1450
- Synthetic Oil Type : THERM 1022
- Polyol Ester Type : THERM 4810
- Water Glycol Type : Q 510

- Process Oil

- Paraffin : P-1, 2, 3, 4, 6

- Gear Oil

- Mineral Oil Type : Super EP 100, 150, 220, 320, 460
- Synthetic Oil Type : Super DE 100, 150, 220, 320
Super PE 100, 150, 220, 320



Manufactured products

- Turbine Oil

- Mineral Oil Type : Thrbin 32, 46, 68, 100
- Synthetic Oil Type : Thrbin Syn 32, 46, 68,

- Heat Treating Oil

- Mineral Oil Type : A 101, 201, 301
- Water Glycol Type : Quench B, HF

- High Temperature Chain Oil

- Mineral Oil Type : Chain Syn 410
- Synthetic Oil Type : Chain DE 150, 250, 320, 520
Chain PE 220

- Grease

- EP 2 : KR 6102, high temperature : HM 7052M, Urea : HB 3102

- Oil Spill Dispersants

- Clean 1000, 5000



Manufactured products

- Mist Oil (Cool wind spray Type)

- MIST 700, 1000, 1500, 2200, 3200, 4600, 6800, 201A
- MIT 1000

- Sintered Metal Bearing Oil

- Mineral Oil Type : LAC 280, 100
- Synthetic Oil Type : SYN 40K, 40K-30, 90K, P350(Oilless 80)
DE 151K, 465K, P1000

- Plastic Working Oil

-Heading Oil 500, - Drawing & Extrusion Oil 2004, - Forging Oil 2004

- Hydraulic oil and slide-way fluid and water-solubility metal-working fluid

- CTE 600



General Purpose Oil : White Mineral Oil

• Product Characteristic

Lubricants and petrochemical applications, textile emulsion, coating inspection, materials such as printing inks. Wood-preservative, water repellent. Fertilizer industry anti-caking agent. Food additives, pharmaceuticals, cosmetics, drug control (emulsion), raw material for agricultural chemicals such as Spray Oil. Natural rubber, synthetic rubber, special rubber-extender, blended oil. Master Batch – Additive (additive). PP, PE – diluents, plasticizers, extender. Food manufacturing machinery lubricants, tableware – microwave food packaging. Food manufacturing anti-foaming agent. Fermentation surface Sealing Layer. Fruits, vegetables, Coating Oils, Meat absorption inhibitors such as packaging, such as an egg. Laver bread and taste-maker mold release agents, inhalation agents Paper, Aluminium Foil – Drawing Stamping Lubricant

• Product Information

Separation	Specific Gravity 15/ 4°C	Kinematic Viscosity cS t 40 °C	Flash Point °C	Viscosity Inde x	Pour Point °C
HP-080	0.875	7.85	≥180	78	-25.0
HS-080	0.864	8.56	≥158	60	-35.0
HS-320	0.861	29.5	≥220	101	-15.0
HS-960	0.876	96.5	≥238	98	-20.0
HU-S20	0.820	7.12	≥158	109	-37.5
HU-S30	0.827	13.47	≥204	117	-25.0
HU-S40	0.834	19.62	≥228	123	-20.0
HU-S60	0.841	28.72	≥232	128	-17.5
HU-S80	0.847	43.89	≥256	127	-15.0
HY-L30	0.832	12.73	≥190	105	-45.0
HY-030	0.830	12.43	≥204	112	-24.0
HY-040	0.834	19.57	≥230	122	-15.0
HY-060	0.842	36.82	≥240	131	-15.0
HY-080	0.850	47.3	≥260	128	-12.0

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Liquid Paraffin Series

• Product Characteristic

- Lubricants and petrochemical applications, textile emulsions, inks raw materials such as due diligence.
- Food additives. Pharmaceuticals, cosmetics, raw materials for agricultural chemicals such as Spray Oil.
- Natural rubber, synthetic rubber, special rubber-extender, blended oil.
- Fertilizer industry mold release agent. Wood preservatives – water repellent.
- Master Batch – Additive (additive). PP, PE – diluents, plasticizers, extender.
- Food manufacturing machinery lubricants, tableware – microwave food packaging. Food manufacturing anti-foaming agent. Fermentation surface Sealing Layer.
- Fruit – vegetables – Coating Oils, Meat absorption inhibitors such as packaging, such as an egg.
- Laver bread and taste-maker mold release agents, inhalation agents Paper, Aluminium Foil – Drawing Stamping lubricant.

• Product Information

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Flash Point ℃	Pour Point ℃	Color ASTM
UDP-80L	0.863	8.56	≥158	-35.0	+30
UDP-200	0.853	20.5	≥210	-17.5	
UDP-310	0.861	29.5	≥220	-15.0	
UDP-680	0.873	68.5	≥235	-15.0	
UDP-960	0.876	96.2	≥238	-20.0	
UDP-30L	0.829	12.7	≥206	-25.0	
UDP-40L	0.829	19.6	≥230	-12.5	
UDP-60L	0.835	35.7	≥242	-15.0	

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Machine Oil Series

• Product Information

Separation	Specific Gravity 15/4℃	Viscosity cSt 40℃	Viscosity Index	Others
LAC 2 ~ 460	0.77↑	ISO VG 2 ~ 460	≥80	Mineral
LAC SYN 5 ~ 460	0.81↑	ISO VG 5 ~ 460	≥120	PAO
LAC DE 5 ~ 320	0.90↑	ISO VG 5 ~ 320	≥80	Ester
LAC PE 5 ~ 320	0.82↑	ISO VG 5 ~ 320	≥120	PAO/Ester

Bearing Oil Series

• Product Information

Separation	Specific Gravity 15/4℃	Viscosity cSt 40℃	Viscosity Index	Others
Bearing 2 ~ 460	0.77↑	ISO VG 2 ~ 460	≥80	Mineral
Bearing SYN 5 ~ 460	0.81↑	ISO VG 5 ~ 460	≥120	PAO
Bearing DE 5 ~ 320	0.91↑	ISO VG 5 ~ 320	≥80	Ester
Bearing PE 5 ~ 320	0.82↑	ISO VG 5 ~ 320	≥120	PAO/Ester

※ ISO VG 2, 3, 5, 7, 10, 15, 22, 32, 46, 68, 100, 150, 220, 320, 460

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Hydraulic Oil Series

• Mineral Base Hydraulic Oil Series

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt		Flash Point ℃	Viscosity Index	Pour Point ℃	Others
		40℃	100℃				
Dalrija HV 22	0.871	22	4.6	≥210	109	-25	Mineral
Dalrija HV 32	0.872	32	5.7	≥220	102	-22.5	
Dalrija HV 46	0.873	46	7.2	≥220	102	-22.5	
Dalrija HV 68	0.874	68	8.8	≥230	102	-20	
Dalrija HV 100	0.876	100	11.8	≥240	102	-15	

• Synthetic Polyalphaolefins Hydraulic Oil : PAO Basestock

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt		Flash Point ℃	Viscosity Index	Pour Point ℃	Others
		40℃	100℃				
Dalrija Syn 32	0.82	30	5.8	≥230	140	-35	PAO
Dalrija Syn 46	0.83	46	8.0	≥250	146	-35	
Dalrija Syn 68	0.83	68	10.5	≥260	142	-35	
Dalrija Syn 100	0.83	100	14.0	≥260	142	-35	

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Synthetic Base Hydraulic Oil

- Synthetic Ester Basestock Hydraulic Oil

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt		Flash Point ℃	Viscosity Index	Pour Point ℃	Others
		40℃	100℃				
Dalrija DE 32	0.92	32	6.7	≥230	130	-35	Ester
Dalrija DE 46	0.92	46	8.6	≥230	130	-35	
Dalrija DE 68	0.92	68	12.0	≥230	140	-35	
Dalrija DE 100	0.95	100	16.0	≥240	140	-35	

- Synthetic Polyalphaolefins & Ester Basestock Hydraulic Oil : PAO & Ester

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt		Flash Point ℃	Viscosity Index	Pour Point ℃	Others
		40℃	100℃				
Dalrija PE 32	0.88	32	6.7	≥230	130	-35	PAO/Ester
Dalrija PE 46	0.88	46	8.6	≥230	130	-35	
Dalrija PE 68	0.88	68	12.0	≥230	140	-35	
Dalrija PE 100	0.88	100	16.0	≥240	140	-35	

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Compressor Oil Series

- Product Characteristic

Reciprocating/rotary air compressor and the gas cylinder and the crankcase of the compressor, vacuum distillation apparatus, etc.

- Mineral Base Compressor Oil Series

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mgKOH/g
Comp 32	32	≥220	-22.5	125	0.01↓	0.01↓	0.05↓
Comp 46	46	≥230	-22.5	117			
Comp 68	68	≥230	-20.0	102			
Comp 100	100	≥240	-15.0	107			

- Synthetic Polyalphaolefins Compresso Oil : PAO Basestock

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mgKOH/g
Comp Syn 1032	32	≥220	-35	135	0.01↓	0.01↓	0.05↓
Comp Syn 1046	46	≥230	-35	138			
Comp Syn 1068	68	≥230	-35	141			
Comp Syn 1100	100	≥250	-35	142			

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Compressor Oil Series

- Product Characteristic

Reciprocating/rotary air compressor and the gas cylinder and the crankcase of the compressor, vacuum distillation apparatus, etc.

- Synthetic Ester Basestock Compressor Oil

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mgKOH/g
Comp DE 2032	32	≥220	-35	82	0.01↓	0.01↓	0.05↓
Comp DE 2046	46	≥220	-35	81			
Comp DE 2068	68	≥230	-35	85			
Comp DE 2100	100	≥230	-35	86			

- Synthetic Polyalphaolefins & Ester Basestock Compressor Oil : PAO & Ester

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mgKOH/g
Comp PE 3032	32	≥220	-35	143	0.01↓	0.01↓	0.05↓
Comp PE 3046	46	≥230	-35	141			
Comp PE 3068	68	≥230	-35	145			
Comp PE 3100	100	≥230	-35	142			

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Refrigerating Machine Oil

- Synthetic Polyalphaolefins Refrigerating Machine Oil : PAO Basestock

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mg KOH/g
Hi Freeze Syn 22	22	≥220	-40	135	0.01 ↓	0.01 ↓	0.05 ↓
Hi Freeze Syn 32	32.	≥220	-40	135			
Hi Freeze Syn 46	46	≥230	-40	138			
Hi Freeze Syn 68	68	≥230	-40	141			
Hi Freeze Syn 100	100	≥250	-40	142			

- Synthetic Ester Basestock Refrigerating Machine Oil

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mg KOH/g
Hi Freeze DE 22	22	≥220	-40	82	0.01 ↓	0.01 ↓	0.05 ↓
Hi Freeze DE 32	32.	≥220	-40	82			
Hi Freeze DE 46	46	≥220	-40	81			
Hi Freeze DE 68	68	≥230	-40	85			
Hi Freeze DE 100	100	≥230	-40	86			

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Refrigerating Machine Oil

Synthetic Polyalphaolefins & Ester Basestock Refrigerating Machine Oil : PAO & Ester

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity I ndex	Ash (%)	Moisture (p pm)	Total Acid Value mg KOH/g
Hi Freeze PE 22	22	≥220	-40	143	0.01 ↓	0.01 ↓	0.05 ↓
Hi Freeze PE 32	32.	≥220	-40	143			
Hi Freeze PE 46	46	≥230	-40	141			
Hi Freeze PE 68	68	≥230	-40	145			
Hi Freeze PE 100	100	≥230	-40	142			

Vacuum Pump Oil

Product Information

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Steam pressure Torr (25°C)	Others
EM 150	15	≥200	-15.0	5 × 10 ⁻⁴	Mineral
EM 350	46	≥210	-15.0		Mineral
EM 300	68	≥210	-15.0		Mineral
EM Syn 500	46	≥210	-40.0		PAO

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Heat Transfer Oil

• Product Characteristic

- Proper operating temperature range of Therm 1350 : -20 ~ + 320℃.
- THERM 4810 has an operating temperature range is a 100% synthetic oil-based Polyol Ester : -30 ~ + 360℃.
- Therm 1010, 1022 is a plant-food-use in pharmaceutical manufacturing and other special places.
- Water Glycol Q 510 : oil-soluble medium. Applies to flammable problem
- Used as a heat transfer medium of various closed circular indirect heating device
- Chemicals heating, dyeing factory ten rides, asphalt heating, various heat exchangers, cooling systems, etc.

• Product Information

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Flash Point ℃	Pour Point ℃	Color ASTM	Corrosive Test (100℃×3h)	Others
THERM 1010	0.87	10.0	≥158	-40.0	L0.5	1a	Mineral
THERM 1022	0.82	22.0	≥240	-50.0	L0.5	1a	PAOsl
THERM 1350	0.86	32.0	≥210	-22.5	L0.5	1a	Mineral
THERM 1450	0.87	46.0	≥230	-15.0	L0.5	1a	Mineral
THERM 4810	0.95	32.0	≥270	-10.0	L0.5	1a	Polyol Ester
Water Glycol Q 510	0.90	42.0~50.0	pH 9.5	-35	L0.5	1a	PAG

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Process Oil Series

- Product Characteristic

Rubber and refined to suit for the chemical process as Paraffinic Process Oil Carbon is the chemical Paraffinic Side Chains, accounting for more than 50% of all carbon and stable Color, light and heat and thus a very light-colored and white discoloration of the product, such as product manufacturing is most suitable as process oil.

- Product Information

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Flash Point ℃	Aniline Point ℃	Pour Point ℃	Color ASTM	Total Acid Value mgKOH/g
P-1	0.872	10.5	≥160	89	-15	L0.5	0.01
P-2	0.867	22.5	≥210	92	-15		
P-3	0.872	45.7	≥210	115	-12.5		
P-4	0.879	96.0	≥210	110	-12.5		
P-6	0.893	460.0	≥300	129	-12.5		

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Industrial Gear Oil Series

• Mineral Base Gear Oil Series

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 40°C	Viscosity Index	Flash Point °C	Pour Point °C	Others
Super EP 100	0.85	100	100	≥230	-12.5	Mineral
Super EP 150	0.85	150	100	≥230	-12.5	
Super EP 220	0.85	220	100	≥240	-12.5	
Super EP 320	0.85	320	100	≥250	-12.5	
Super EP 460	0.85	460	100	≥250	-12.5	

• Synthetic Polyalphaolefins Gear Oil : PAO Basestock

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 40°C	Viscosity Index	Flash Point °C	Pour Point °C	Others
Super Syn 100	0.92	100	80	≥240	-35	Ester
Super Syn 150	0.90	150	70	≥250	-35	
Super Syn 220	0.92	220	70	≥260	-35	
Super Syn 320	0.92	320	70	≥280	-35	

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Industrial Gear Oil Series

- Synthetic Ester Basestock Gear Oil Series**

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Viscosity Index	Flash Point ℃	Pour Point ℃	Others
Super DE 100	0.92	100	80	≥240	-35	Ester
Super DE 150	0.90	150	70	≥250	-35	
Super DE 220	0.92	220	70	≥260	-35	
Super DE 320	0.92	320	70	≥280	-35	

- Synthetic Polyalphaolefins & Ester Basestock Gear Oil : PAO & Ester)**

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Viscosity Index	Flash Point ℃	Pour Point ℃	Others
Super PE 100	0.88	100	140	≥240	-35	PAO/Ester
Super PE 150	0.88	150	140	≥250	-35	
Super PE 220	0.88	220	140	≥260	-35	
Super PE 320	0.88	320	140	≥280	-35	

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Turbine Oil Series

- Product Characteristic

Gas and steam turbines are used for the lubrication of bearings in addition to various kinds of machinery, reduction gear and lubricating fluid coupling, and the circulatory system can also be used

- Mineral Base Turbine Oil Series

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt		Flash Point °C	Total Acid mgKOH/g	Pour Point °C	Corrosive Test (100°C×3h)
		40°C	100°C				
THRBIN 32	0.871	32	5.3	≥210	0.01	-15.0	1a
THRBIN 46	0.877	46	6.8	≥210		-15.0	
THRBIN 68	0.881	68	8.8	≥210		-12.5	
THRBIN 100	0.885	100	11.4	≥210		-12.5	

- Synthetic Polyalphaolefins Turbine Oil : PAO Basestock

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt		Flash Point °C	Total Acid mgKOH/g	Pour Point °C	Corrosive Test (100°C×3h)
		40°C	100°C				
THRBIN Syn 32	0.88	32	7	≥230	175	-35	1a
THRBIN Syn 46	0.88	46	9	≥230	175	-35	
THRBIN Syn 68	0.88	68	12	≥230	175	-35	

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Quenching Oil : Heat Treating Oil

- **Product Characteristic**

Quenching oil and having a sufficient hardenability because there is no risk of deformation or cracks are difficult to cure and for quenching of alloy steel, carbon steel, cast iron and steel products of various heat treatment applied.

- **Mineral Quenching Oil**

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Flash Point ℃	To burn ℃	Cooling performance		Others
					Characteristic temperature	Cooling sec. (800~400 ℃)	
A 101	0.870	15	≥210	230	620	2.80	상온용
A 201	0.875	22	≥214	250	610	3.71	상온용
A 301	0.891	460	≥310	365	680	5.20	고온용

- **Synthetic Based → Water-Soluble Quenching Oil**

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	pH	적용 재질	사용 농도(%)	Others
Quench B	1.08	300	9.5	철, 알루미늄	5~25	오일대체용 (PAG)
Quench HF	1.08	320	9.5			

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High Temperature Chain Oil

• Product Information

Separation	Specific Gravity 15/4 °C	Kinematic Viscosity cSt		Flash Point °C	Viscosity Index	Pour Point °C	Others
		40 °C	100 °C				
Chain Syn 410	0.84	410	39	≥260	145	-45	PAO(4)
Chain DE 150	0.99	152	20	≥270	152	-30	Ester(8355)
Chain DE 250	0.95	250	20	≥290	92	-18	Ester(1060X)
Chain DE 320	1.00	316	32	≥270	142	-30	Ester(8361)
Chain DE 520	0.95	520	50	≥280	150	-30	Ester(8851)
Chain PE 220	0.92	220	50	≥280	143	-35	PAO/Ester

Grease

• Product Information

Separation	Worked Penetration	Worked Stability	Oil Separation (100 °C × 24h)	Evaporation Loss (99 °C × 24h)	Oxidation Stability (kgf/cm ²)	Copper Corrosive Test (100 °C × 24h)	Others
KR 6102	275	345	2.3	0.25	0.3	Pass	General
HM 7052M	270	325	1.3	0.38	0.4	Pass	High temperature
HB 3102	295	345	1.0	0.15	0.1	Pass	Urea

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Oil Spill Dispersants

- **Product Characteristic**

Low toxicity, high performance oil treatment → hydrocarbon solvent-based, concentrated form / concentrate or emulsion spray atomizer

- **Product Information**

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt	Flash Point °C	Others
		40°C		
Clean 1000	0.89	13.0	≥165	Hydrocarbon Solvent Type
Clean 5000	0.88	6.0	≥145	Concentration Type

Lamp Oil

- **Product Information**

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 25°C	Flash Point °C	Refractive Index at 20°C	Saybolt Colour
Lamp 200 D	0.7995	2.25	≥77	1.4411	+30
Lamp 200 M	0.790	2.12	≥78	1.437	+30
Lamp 200 L	0.773	1.38	≥65	1.429	+30

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Oilless Bearing Oil : PAO/Ester Basestock Biodegradable

• Product Characteristic

Office equipment, measuring equipment, Oilless Bearing impregnation, impregnated components, I wear bearing, low temperature lubrication, aircraft parts, Precision instruments. Refrigeration motors, refrigeration, vacuum pump

• Product Information

Separation	Specific Gravity 15/4℃	Kinematic Viscosity cSt 40℃	Viscosity Index	Pour Point ℃	Application
Oilless 2	0.82	5	170	-40	-40 ~ 80
Oilless 5	0.82	5.5	170	-40	-40 ~ 80
Oilless 36	0.83	36	170	-40	-40 ~ 80
Oilless 60	0.84	60	187	-40	-30 ~ 80
Oilless 70	0.84	70	185	-40	-30 ~ 80

Plastic Working Oil

• Product Information (Mineral Oil Series)

Separation	Kinematic Viscosity cSt 40℃	Flash Point ℃	Four-ball Test Mpa
Heading Oil 500	46	≥220	0.15↑
Drawing & Extrusion Oil 2004	36	≥300	
Forging Oil 2004	46	≥220	

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.

Hydraulic oil and slide-way fluid and water-solubility metal-working fluid

• Product Characteristic

- Used as a lubricant during machine operation: use undiluted
- Water soluble agent used: Use a diluted solution of 3-10%

• Product Information

Separation	Specific Gravity 15/4℃	Viscosity cSt 40℃	Total Acid mgKOH/g	Pour Point ℃	Corrosive Test (100℃×3h)
CTE 600	0.871	68	0.01	-40.0	1a

Oil Mist (cold, aerosol) Processed

• Product Characteristic

- Ester Basestock Biodegradable Mist MWFs

• Product Information

Separation	Specific Gravity 15/4℃	Viscosity cSt 40℃	Total Acid mgKOH/g	Pour Point ℃	Corrosive Test (100℃×3h)
Mist 700	0.85	7	0.05	-30	1a
MIST 1000	0.86	10	0.05	-30	
MIST 1500	0.87	15	0.05	-30	
MIST 2200	0.87	22	0.05	-30	
MIST 3200	0.87	32	0.05	-30	
MIST 4600	0.84	46	0.05	-35	
MIST 6800	0.84	68	0.05	-35	
MIST 201A	0.84	46	0.05	-35	
MIT 1000	0.86	8.5	0.05	-30	

※ Above value is the latest test result and it can be some difference in extent that there is no effect in performance.