

## Specifications of Products

### General Purpose Oil : White Mineral Oil

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 40 °C	Flash Point °C	Viscosity Index	Pour Point °C	Application
HP-080	0.875	7.85	≥180	78	-25.0	Lubricants and petrochemical applications, textile emulsion, coating inspection, materials such as printing inks. Wood-preserved, 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
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	

### Liquid Paraffin Series

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Color ASTM	Application
UDP-80L	0.863	8.56	≥158	-35.0	+30	Lubricants and petrochemical applications, textile emulsion, coating inspection, materials such as printing inks. 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.
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		

## Machine Oil

### Mineral Bases Machine Oil Series

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
LAC 2	0.7784	1.98~2.42	80 ↑	-10 ↓	-	1a	<b>Petroleum,</b> Highly refined Yun Zing euro manufacturing. Oil-water separation-anti-excellent oil paintings, various industrial machinery, did not place among the extreme temperature-lubrication for high-speed rolling machine, light, high-speed machine tools, precision machine, machine oil, rust preventive oil, coolant, use a Base Oil such as hardening oil
LAC 3	0.7866	2.88~3.52	80 ↑	-10 ↓	-		
LAC 5	0.7955	4.14~5.06	80 ↑	-10 ↓	-		
LAC 7	0.8522	6.12~7.48	130 ↑	-10 ↓	78		
LAC 10	0.8542	9.00~11.0	130 ↑	-10 ↓	80		
LAC 15	0.8560	13.5~ 16.5	160 ↑	-10 ↓	80		
LAC 22	0.8561	19.8~24.2	150 ↑	-10 ↓	100		
LAC 32	0.8630	28.8~35.2	150 ↑	-10 ↓	100		
LAC 46	0.8754	41.4~56.0	160 ↑	-10 ↓	100		
LAC 68	0.8765	61.2~74.8	160 ↑	-10 ↓	100		
LAC 100	0.8765	90.0~110.0	160 ↑	-10 ↓	100		
LAC 150	0.8785	135~165	160 ↑	-10 ↓	100		
LAC 220	0.8754	198~242	160 ↑	-10 ↓	100		
LAC 320	0.8765	288~352	160 ↑	-10 ↓	100		
LAC 460	0.8785	414~506	160 ↑	-10 ↓	100		

### Synthetic Polyalphaolefins Machine Oil : PAO Basestock

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
LAC Syn 5	0.7907	4.14~5.06	160 ↑	-40 ↓	-	1a	<b>PAO,</b> Low-temperature fluidity, high viscosity indices, low volatility, high thermal stability, oxidation-hydrolysis stability and conformity, non-toxic, very wide range of use, excellent lubricity and anti-emulsification top, temperature and load used for lubrication, extreme IRA
LAC Syn 7	0.8076	6.12~7.48	180 ↑	-40 ↓	-		
LAC Syn 10	0.8220	9.00~11.0	180 ↑	-40 ↓	120		
LAC Syn 15	0.8230	13.5~ 16.5	200 ↑	-40 ↓	120		
LAC Syn 22	0.8230	19.8~24.2	210 ↑	-40 ↓	140		
LAC Syn 32	0.8231	28.8~35.2	220 ↑	-40 ↓	140		
LAC Syn 46	0.8305	41.4~56.0	230 ↑	-40 ↓	140		
LAC Syn 68	0.8315	61.2~74.8	230 ↑	-40 ↓	140		
LAC Syn 100	0.8315	90.0~110.0	230 ↑	-40 ↓	140		
LAC Syn 150	0.8330	135~165	230 ↑	-40 ↓	140		
LAC Syn 220	0.8350	198~242	240 ↑	-40 ↓	140		
LAC Syn 320	0.8350	288~352	240 ↑	-40 ↓	140		

**Synthetic Ester Basestock Machine Oil**

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
LAC DE 5	0.9150	4.14~5.06	200 ↑	-40 ↓	-	1a	<b>Ester.</b> High-temperature stability, the pole pressure lubrication excellence, biodegradable high., the viscosity-temperature relationship stable, good mold release, low evaporation loss additive solubility, silky tactile lubrication, friction resistance is low, very wide range of use,
LAC DE 7	0.9202	6.12~7.48	200 ↑	-40 ↓	-		
LAC DE 10	0.9220	9.00~11.0	200 ↑	-40 ↓	130		
LAC DE 15	0.9230	13.5~ 16.5	200 ↑	-40 ↓	130		
LAC DE 22	0.9231	19.8~24.2	210 ↑	-40 ↓	130		
LAC DE 32	0.9233	28.8~35.2	220 ↑	-40 ↓	60		
LAC DE 46	0.9240	41.4~56.0	230 ↑	-40 ↓	60		
LAC DE 68	0.9240	61.2~74.8	230 ↑	-30 ↓	60		
LAC DE 100	0.9501	90.0~110.0	230 ↑	-30 ↓	80		
LAC DE 150	0.9520	135~165	230 ↑	-30 ↓	70		
LAC DE 220	0.9530	198~242	240 ↑	-30 ↓	70		
LAC DE 320	0.9605	288~352	240 ↑	-30 ↓	70		

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

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
LAC PE 5	0.8305	4.14~5.06	180 ↑	-40 ↓	-	1a	<b>PAO &amp; Ester</b> High-temperature stability pole pressure lubrication is excellent, excellent, viscosity-temperature relationship stability, oxidation stability additive solubility is excellent, low evaporation loss, friction resistance is low, very wide range of use, temperature and load used for lubrication of this severe place.
LAC PE 7	0.8522	6.12~7.48	180 ↑	-40 ↓	-		
LAC PE 10	0.8542	9.00~11.0	180 ↑	-40 ↓	110		
LAC PE 15	0.8570	13.5~ 16.5	200 ↑	-40 ↓	120		
LAC PE 22	0.8561	19.8~24.2	210 ↑	-40 ↓	120		
LAC PE 32	0.8630	28.8~35.2	220 ↑	-40 ↓	130		
LAC PE 46	0.8754	41.4~56.0	230 ↑	-40 ↓	130		
LAC PE 68	0.8765	61.2~74.8	230 ↑	-30 ↓	140		
LAC PE 100	0.8765	90.0~110.0	230 ↑	-30 ↓	140		
LAC PE 150	0.8785	135~165	230 ↑	-30 ↓	140		
LAC PE 220	0.8754	198~242	240 ↑	-30 ↓	140		
LAC PE 320	0.8765	288~352	240 ↑	-30 ↓	140		

# Bearing Oil

## Mineral Bases Bearing Oil Series

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
Bearing 2	0.7784	1.98~2.42	80 ↑	-10 ↓	-	1a	<b>Petroleum</b> If the optional use of viscous-fluid-film lubrication of metal, forming a strong friction and abrasion-resistant, mechanical life extension. Corrosion-rust protection top. Circulation, oil baths, secret ceremony refueling way various machines bearing lubricant used during high-speed rotation machines, light-speed machine tools, precision machine machinery oil
Bearing 3	0.7866	2.88~3.52	80 ↑	-10 ↓	-		
Bearing 5	0.7955	4.14~5.06	80 ↑	-10 ↓	-		
Bearing 7	0.8522	6.12~7.48	130 ↑	-10 ↓	78		
Bearing 10	0.8542	9.00~11.0	130 ↑	-10 ↓	80		
Bearing 15	0.8560	13.5~ 16.5	160 ↑	-10 ↓	80		
Bearing 22	0.8561	19.8~24.2	150 ↑	-10 ↓	100		
Bearing 32	0.8630	28.8~35.2	150 ↑	-10 ↓	100		
Bearing 46	0.8754	41.4~56.0	160 ↑	-10 ↓	100		
Bearing 68	0.8765	61.2~74.8	160 ↑	-10 ↓	100		
Bearing 100	0.8765	90.0~110.0	160 ↑	-10 ↓	100		
Bearing 150	0.8785	135~165	160 ↑	-10 ↓	100		
Bearing 220	0.8754	198~242	160 ↑	-10 ↓	100		
Bearing 320	0.8765	288~352	160 ↑	-10 ↓	100		
Bearing 460	0.8785	414~506	160 ↑	-10 ↓	100		

## Synthetic Polyalphaolefins Bearing Oil : PAO Basestock

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
Bearing Syn 5	0.7907	4.14~5.06	160 ↑	-40 ↓	-	1a	<b>PAO,</b> Excellent low temperature fluidity, high viscosity indices, low volatility, high thermal stability, oxidation-hydrolysis stability, non-toxic, oily water separation and constant snapping at top, circulation, oil painting, secret ceremony refueling during high-speed rotation machines, light-fast and precise machines, machine tools, machine oil
Bearing Syn 7	0.8076	6.12~7.48	180 ↑	-40 ↓	-		
Bearing Syn 10	0.8220	9.00~11.0	180 ↑	-40 ↓	120		
Bearing Syn 15	0.8230	13.5~ 16.5	200 ↑	-40 ↓	120		
Bearing Syn 22	0.8230	19.8~24.2	210 ↑	-40 ↓	140		
Bearing Syn 32	0.8231	28.8~35.2	220 ↑	-40 ↓	140		
Bearing Syn 46	0.8305	41.4~56.0	230 ↑	-40 ↓	140		
Bearing Syn 68	0.8315	61.2~74.8	230 ↑	-40 ↓	140		
Bearing Syn 100	0.8315	90.0~110.0	230 ↑	-40 ↓	140		
Bearing Syn 150	0.8330	135~165	230 ↑	-40 ↓	140		
Bearing Syn 220	0.8350	198~242	240 ↑	-40 ↓	140		
Bearing Syn 320	0.8350	288~352	240 ↑	-40 ↓	140		

**Synthetic Ester Basestock Bearing Oil Series**

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
Bearing DE 5	0.9150	4.14~5.06	200 ↑	-40 ↓	-	1a	<b>Ester,</b> Low-temperature stability in the volatile, high thermal oxidation stability, non-toxic, pole pressure lubrication Excellence (turbocharger, aircraft bearings), striped top, detaching and prominent anti-oil paintings, oil baths, secret ceremony refueling way various machines are used, the lubricant bearing-out high speed rolling machine, high-speed machine tools, precision machine machinery oil
Bearing DE 7	0.9202	6.12~7.48	200 ↑	-40 ↓	-		
Bearing DE 10	0.9220	9.00~11.0	200 ↑	-40 ↓	130		
Bearing DE 15	0.9230	13.5~ 16.5	200 ↑	-40 ↓	130		
Bearing DE 22	0.9231	19.8~24.2	210 ↑	-40 ↓	130		
Bearing DE 32	0.9233	28.8~35.2	220 ↑	-40 ↓	60		
Bearing DE 46	0.9240	41.4~56.0	230 ↑	-40 ↓	60		
Bearing DE 68	0.9240	61.2~74.8	230 ↑	-30 ↓	60		
Bearing DE 100	0.9501	90.0~110.0	230 ↑	-30 ↓	80		
Bearing DE 150	0.9520	135~165	230 ↑	-30 ↓	70		
Bearing DE 220	0.9530	198~242	240 ↑	-30 ↓	70		
Bearing DE 320	0.9605	288~352	240 ↑	-30 ↓	70		

**Synthetic Polyalphaolefins & Ester Basestock Bearing Oil : PAO & Ester**

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Corrosive Test (100°C×3h)	Application
Bearing PE 5	0.8305	4.14~5.06	180 ↑	-40 ↓	-	1a	<b>PAO &amp; Ester,</b> High-temperature stability, high thermal stability additives solubility are excellent, excellent lubricity and low evaporation loss pole pressure, silky tactile lubrication excellence, friction resistance is low, the range is very wide, prominent separation, anti-excellent oil resistance, anti-rust performance, temperature and load used for lubrication of this severe place.
Bearing PE 7	0.8522	6.12~7.48	180 ↑	-40 ↓	-		
Bearing PE 10	0.8542	9.00~11.0	180 ↑	-40 ↓	110		
Bearing PE 15	0.8570	13.5~ 16.5	200 ↑	-40 ↓	120		
Bearing PE 22	0.8561	19.8~24.2	210 ↑	-40 ↓	120		
Bearing PE 32	0.8630	28.8~35.2	220 ↑	-40 ↓	130		
Bearing PE 46	0.8754	41.4~56.0	230 ↑	-40 ↓	130		
Bearing PE 68	0.8765	61.2~74.8	230 ↑	-30 ↓	140		
Bearing PE 100	0.8765	90.0~110.0	230 ↑	-30 ↓	140		
Bearing PE 150	0.8785	135~165	230 ↑	-30 ↓	140		
Bearing PE 220	0.8754	198~242	240 ↑	-30 ↓	140		
Bearing PE 320	0.8765	288~352	240 ↑	-30 ↓	140		

# Hydraulic Oil

## Mineral Base Hydraulic Oil Series

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt °C		Flash Point °C	Viscosity Index	Pour Point °C	Color ASTM	Application
		40	100					
Dalrija HV 22	0.871	22	4.6	≥210	109	-25	L 1.0	<b>Petroleum.</b> Wear resistance. Hydraulics and industrial machinery system, hydraulic
Dalrija HV 32	0.872	32	5.4	≥224	102	-22.5	L 1.0	
Dalrija HV 46	0.873	46	6.5	≥228	102	-22.5	L 1.5	
Dalrija HV 68	0.884	68	8.7	≥236	102	-20	L 1.5	
Dalrija HV 100	0.876	100	11.5	≥242	102	-15	L 1.5	

## Synthetic Polyalphaolefins Hydraulic Oil : PAO Basestock

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt °C		Flash Point °C	Viscosity Index	Pour Point °C	Color ASTM	Application
		40	100					
Dalrija Syn 32	0.82	30	5.8	≥230	139	-35	L 1.5	<b>PAO.</b> Low temperature-high temperature stability, high viscosity index, low volatility,
Dalrija Syn 46	0.83	46	8	≥250	146	-35	L 1.5	
Dalrija Syn 68	0.83	68	10	≥260	142	-35	L 1.5	
Dalrija Syn 100	0.83	100	14	≥260	142	-35	L 1.5	

## Synthetic Ester Basestock Hydraulic Oil

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt °C		Flash Point °C	Viscosity Index	Pour Point °C	Color ASTM	Application
		40	100					
Dalrija DE 32	0.92	32	6.7	≥230	130	-35	L 1.0	<b>Ester,</b> Low temperature-high temperature stability, high thermal oxidative stability, low friction coefficient
Dalrija DE 46	0.92	46	8.6	≥230	130	-35	L 1.5	
Dalrija DE 68	0.92	68	12.0	≥230	140	-35	L 1.5	
Dalrija DE 100	0.95	100	16.0	≥240	140	-35	L 1.5	

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

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt °C		Flash Point °C	Viscosity Index	Pour Point °C	Color ASTM	Application
		40	100					
Dalrija PE 32	0.86	32	6.7	≥230	130	-35	L 1.0	<b>PAO &amp; Ester</b> Friction, abrasion, excellent sliding property used for high temperature, high pressure, cryogenic, extreme lubrication conditions
Dalrija PE 46	0.87	46	8.6	≥230	130	-35	L 1.5	
Dalrija PE 68	0.87	68	12.0	≥230	140	-35	L 1.5	
Dalrija PE 100	0.87	100	16.0	≥240	140	-35	L 1.5	

**PAGs Incombustibility Hydraulic Oil Series**

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt		PH	Characteristics and application
		40 °C			
Dalrija HF 46	1.05	46		9.5	PAGs,

# Compressor Oil

## 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			

## 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			



## 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 mgKOH/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 mgKOH/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			

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

Separation	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Viscosity Index	Ash (%)	Moisture (ppm)	Total Acid Value mgKOH/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

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

## Heat Transfer Oil

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Corrosive Test (100°C×3h)	Others
THERM 1010	0.87	10.0	≥158	-40.0	1a	Mineral
THERM 1022	0.82	22.0	≥240	-50.0	1a	PAOs
THERM 1350	0.86	32.0	≥210	-22.5	1a	Mineral
THERM 1450	0.87	46.0	≥230	-15.0	1a	Mineral
THERM 4810	0.95	32.0	≥270	-10.0	1a	Polyol Ester
Water Glycol Q 510	0.91	46.0	pH 9.5	-35.0	1a	PAGs

## Process oil series

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Aniline Point °C	Pour Point °C	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		

## Gear Oil

### Mineral Base Gear Oil Series

Separation	Specific Gravity 15/4°C	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 Ester Basestock Gear Oil Series

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Viscosity Index	Flash Point °C	Pour Point °C	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°C	Viscosity cSt 40°C	Viscosity Index	Flash Point °C	Pour Point °C	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	

## Turbine Oil

### Mineral Base Turbine Oil Series

Separation	Specific Gravity 15/4°C	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	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	32.0	7.0	≥230	175	-35	1a
THRBIN Syn 46	0.88	46.0	9.0	≥230	175	-35	
THRBIN Syn 68	0.88	68.0	12.0	≥230	175	-35	

## Quenching oil : Heat treating oil

### Mineral Quenching Oil

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

### Water-soluble Quenching Oil

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	pH	Apply material	Concentrations (%)	Others
Quench B	1.08	300	9.5	Iron, aluminum	5~25	Substitute for oil (PAG)
Quench HF	1.08	320	9.5			

**High Temperature Chain Oil**

Separation	Specific Gravity 15/4°C	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)

**Grease**

Separation	Worked Penetration	Worked Stability	Oil Separation (100°C x 24h)	Evaporation Loss (99°C x 24h)	Oxidation Stability (kgf/cm <sup>2</sup> )	Copper Corrosive Test (100°C x 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

**Oil spill dispersants**

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

**Lamp Oil**

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

**Oilless Bearing Oil : PAO/Ester Basestock Biodegradable**

Separation	Specific Gravity 15/4°C	Kinematic Viscosity cSt 40°C	Viscosity Index	Pour Point °C	Application
Oilless 2	0.82	5.0	170	-40	-40 ~ 80
Oilless 5	0.82	5.5	170	-40	-40 ~ 80
Oilless 36	0.83	36.0	170	-40	-40 ~ 80
Oilless 60	0.84	60.0	187	-40	-30 ~ 80
Oilless 70	0.84	70.0	185	-40	-30 ~ 80

**Plastic working oil**

Separation	Kinematic Viscosity cSt 40°C	Flash Point °C	Four-ball Test Mpa
Heading Oil 500	46.0	≥220	0.15 ↑
Drawing & Extrusion Oil 2004	36.0	≥300	
Forging Oil 2004	46.0	≥220	

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

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

**Oil Mist (cold, aerosol) Processed**

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Total Acid mgKOH/g	Pour Point °C	Corrosive Test (100°C×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	

**Special solvents for printing inks**

Separation	Specific Gravity 15/4°C	Viscosity cSt 40°C	Flash Point °C	Pour Point °C	Aniline point (°C)	Saybolt Colour	Corrosive Test 100°C×3h	Distillation range	Others.
								I.B.P/EP	
MJ-3010	0.836	3.20	130	-15	72.0	+28	1a	262/290	Flushing Traction
MJ-3020	0.840	4.05	138	-10	77.5			280/310	
MJ-3030	0.865	4.95	138	-17.5	72.0			280/312	
MJ-3040	0.875	5.25	138	-25	70.0			280/312	
MJ-3050	0.870	6.80	142	-25	77.0	+28	1a	290/340	Drive by
MJ-3060	0.887	9.30	145	-40	73.0			+23	