

CUTTING OIL

WATER SOLUBLE

MINERAL OIL BASED

Item	Appearance	pH	Recommen d Conc. (%)	Application
COOL EX-440	White Emulsion	10,2	5-8%	Iron & Steel
HEZ-4000	White Emulsion	9.7	8-12%	AL Boring cutting
EZ-500	White Emulsion	9.7	8-15%	Al cutting grinding

SEMI-SYNTHETIC

Item	Appearance	pH	Recommen d Conc. (%)	Application
COOL ZOL-310	Light Blue Clear	10.0	5-10%	IRON Cutting & Grinding
COOL EX-9120	Micro Emulsion	9,5	8-12%	IRON Cutting & Grinding

SYNTHETIC

Item	Appearance	pH	Recommen d Conc.(%)	Application
COOL SYN-370R	Green Clear	9,6	8-10%	Iron & Steel
COOL SYN-6510A	Colorless Clear	9.0	5-8%	Iron & Steel
COOL SYN-550R	Green Clear	9,9	8-15%	Iron & Steel
Zero M-8000	Light Yellow Clear	7.6	5-10%	Premium AL cutting

FOR METALWORKING FLUIDS IT'S TIME TO CHANGE THE STANDARDS OF YOUR CHOICE

INSOLUBLE

NEAT METAL CUTTING

Item	Appearance	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Application
CUT PINE-605	Light Yellow Clear	5	137	TURNING MILLING DRILLING
CUT EP-814	Yellow Clear	14	172	BROACHING MILLING
CUT EP-820	Dark red Clear	20	164	TAP SHAPER GEAR
CUT EP-424Q	Light Yellow	25	206	TURNING MILLING DRILLING GRINDING

MQL CUTTING OIL

Item	Appearance	Flash Point °C, COC	Viscosity 40 °C, mm ² /s	Application
CUT MQL-2	Yellow Clear	250	32	HONNING END MILLING GRINDING
MQL 843HU	Yellow Clear	200	35	HONNING END Mill

EDM OIL

Item	Appearance	Flash Point °C, COC	Viscosity 40 °C, mm ² /s	Application
EDM-100	Colorless	92	1,6	ELECTRIC DISCHARGE MACHINING

INDUSTRIAL

HYDRAULIC | MINERAL

Types	Item	Visc. Index	Flash Point (COC, °C)	Pour Point (°C)	Viscosity 40 °C, mm ² /s
Wear Resistant ISO-L-HM TYPE	HYDRO-32	115	230	-30	35
	HYDRO-46	115	230	-30	46
	HYDRO-68	110	230	-30	68

HYDRAULIC | FIRE RESISTANCE

TYPES	Item	Viscosity Index	Flash Point (COC, °C)	Pour Point (°C)	Viscosity 40 °C, mm ² /s
HFDU	HYDRO BFE-346	180	MIN 275	MAX -20	46
	HYDRO BFE-56	180	310	-30	56
	HYDRO BFE-68	180	310	-30	68
HFC	HYDRO BWG-146	MIN 200	-	-50	46
	HYDRO BWG-168	MIN 200	-	-50	68

SPINDLE OIL

Item	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Pour Point (°C)	Copper Corrosion (100°C X 3hrs)
SPIN-2H	2	102	-7.5	1B
SPIN-10	22	176	-40	1B

HEAT TRANSFER OIL

Item	Viscosity 40 °C, mm ² /s	FLASH POINT °C	Pour Point (°C)	De.
THERM-32	32	MIN. 250	MAX, -15	Premium base oil
THERM-46	46	MIN. 250	MAX, -15	Premium base oil
THERM SYN - 22	22	MIN. 400	MAX. -45	Semi Syntethic
SYN TRANSFER OIL -22	22	MIN. 400	MAX. -40	Full Syntethic

GEAR OIL

Item	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Pour Point (°C)	Copper Corrosion (100°C X 3hrs)
BHG-150	150	MIN, 220	-22,5	1B
BHG-220	220	MIN, 220	-20	1B
BHG-320	320	MIN, 220	-17,5	1B

SLIDEWAY LUBRICANT

Item	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Pour Point (°C)	Copper Corrosion (100°C X 3hrs)
WAY BSH-68	68	220	-30	35
WAY BSH-100	100	230	-20	46
WAY BSH-150	150	240	-20	68

AIR COMPRESSOR

Item	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Pour Point (°C)	Copper Corrosion (100°C X 3hrs)	De.
COMP-46SE	46	120	240	-35	Premium base oil
COMP-68S	68	110	250	-15	Premium base oil
COMP-4600Z	42	120	240	-40	Semi Syntethic
COMP-4600P	42	123	250	-50	Full Syntethic

VACCUM PUMP OIL

Item	Viscosity 40 °C, mm ² /s	Flash Point (COC, °C)	Pour Point (°C)	Copper Corrosion (100°C X 3hrs)
VPL-68	68	MIN, 250	MAX, -30	1A
VPL-100	100	MIN, 250	MAX, -30	1A

FORMING OIL

PRESS & FORMING OIL

Item	Appearance	Viscosity 40 °C, mm²/s	Flash Point, °C, COC	Application
FINEBLANK 150S	Yellow Clear	22	160	BLANKING PIERCING
FINEDRAW 620	Yellow Clear	48	200	AL,Cu pressing
FINEDRAW 1100	Yellow Clear	112	215	AL,Cu Drawing
FINEFORM 880I	Clear Brown	88,3	196	Drawing Forming

QUICK DRY STAMPING OIL

Item	Appearance	Spec. Gravity 15/4°C	Viscosity 40 °C, mm²/s	Flash Point, °C, COC
FINEPUNCH 50V	Colorless	0.770	1.44	57
FINEPUNCH FL-33	Colorless	0.893	1.12	215
FINEPUNCH 590	Yellow Clear	0.798	2.67	53

DRY FILM CHAIN LUBRICANT

CHAIN OIL

Items	Viscosity 40 °C, mm²/s	FLASH POINT °C	Pour Point (°C)	APPEARANCE (VISUAL INSPECTION)
MCL - 280	284.6	290	-16	Brown Transparent

DIE CASTING

Item	Appearance	Spec. Gravity 15/4°C	pH	Application
DIELUBE 970	White Emulsion	0.990	9.5	800 Ton ↓
DIELUBE 980	White Emulsion	0.990	9.5	800 Ton ↓
DIELUBE 990KN(D)	White Emulsion	0.984	9.5	2,500 Ton ↓

PLUNGER OIL

Item	Appearance	Spec. Gravity 15/4°C	Viscosity 40°C, mm²/s	Flash Point, °C, COC
FINE PLUNGER 300	Brown	0.88	330	270
FINE PLUNGER 500	Brown	0.89	540	315

ANTI-RUST

ANTI- RUSTING OIL

Items	Viscosity 40 °C, mm²/s	FLASH POINT °C	FILM THICKNESS	SALT SPRAY TEST
RUSTOP P-340N	2.9	103	2-3	8,A
RUSTOP P-DBH(A)	2.7	75	2-3	12,A
RUSTOP P-325S	1.4	45	1-2	36,A
RUSTOP P-DBH(N)	2.1	45	2-3	48,A
RUSTOP P-325Y	1.6	45	1-2	100,A
RUSTOP P-260N	3.0	75	3-5	120,A

Items	Visco. 40 °C, mm²/s	FLASH POINT °C	FILM THICKNESS	INDOOR PERIOD (months)	APPLICATION
RUSTOP VP-101	4.5	100	2-3	2-3	Closed space for packing

GREASE

Items	Consistency (25°C)	Dropping Point (°C)	Oil Separation (100°C/24h)	Oxidation Stability	Copper Strip Corrosion (100°C/24h)
EP #2	270	204	2.5	0.25	Pass
EP #3	235	208	1.5	0.25	Pass

Items	Worked Penetration (25°C)	Dropping Point (°C)	Oil Separation (100°C/24h)	Oxidation Stability	Water Washout (38°C) wt%
CSG 100	255 - 285	min. 250	max. 5.0	max. 0.3	max. 5.0
CSG 150	300 - 330	min. 220	max. 10	max. 1.0	max. 8.0

QUENCHING

QUENCHING OIL

Items	Visco. 40 °C, mm²/s	FLASH POINT °C	Char. Temp.	TEMP.	APPLICATION
1280 C	18.5	200	615	50-90	Cold & High Speed
SEMI HOT-2100S	8.2	240	600	80-120	Semi Hot & Medium Speed

POLYMER QUENCHANT

Items	Spec. Gravity	Visco. 40 °C, mm²/s	pH	Conc. for use	APPLICATION
POLY QUENCH - 510N	1.066	310	8.0	5-25%	- Excellent defoaming & anti decomposition - For direct quenching and spray cooling for induction hardening

TEXTILE OIL

Items	Spec. Gravity	Visco. 40 °C, mm²/s	FLASH POINT °C	Pour Point (°C)	APPLICATION
TXT-7	0.82	7.5	160	-21	NEEDLE OIL
TXT-22N	0.83	21.0	226	-21	WEAVING LOOM MACHINE
TXT ZERO	0.98	10.9	228	-21	SYNTETHIC WEAVING LOOM MACHINE