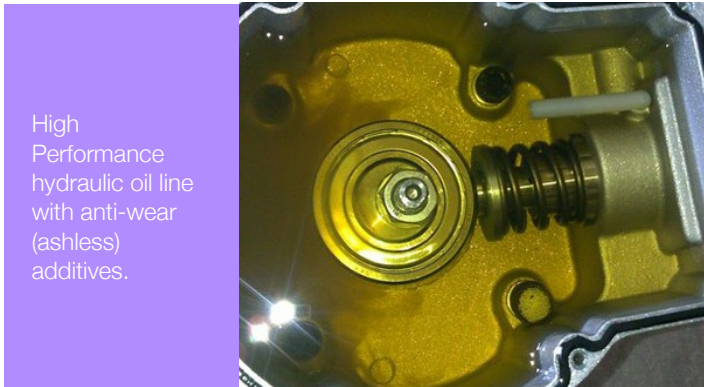


# TECHNICAL DATASHEET

Metalworking Lubricants System



TECHNICAL DATASHEET



High Performance hydraulic oil line with anti-wear (ashless) additives.

**klänoilh**  
BY KLÄTENN  
METALWORKING LUBRICANTS SYSTEM  
**line**

## DESCRIPTION

High Performance Hydraulic oil with anti-wear (ashless) additives.

## APPLICATIONS

**Klantenn's** line of hydraulic fluids are industrial grade lubricating oils with anti-wear characteristics to protect the internal parts of pumps. It provides a long duration to any hydraulic system, specially those in severe service conditions (continuous work at high pressures and speeds).

Designed to meet the most rigorous requirements of leading manufacturers of hydraulic equipment.

They are characterized by their low tendency to form deposits and ashes thanks to the latest generation of anti-wear (ashless) additives. They are also distinguished by its good protection against oxidation, rust (even under thin films of oil) and excellent demulsibility.

## CHARACTERISTICS AND BENEFITS

Fewer system failures allow for a longer machine life and lower costs for oil change.

Better cleaning of servo valves, reducing the likelihood of clogging.

Excellent corrosion protection, even for multi-metal components.

### For more information please contact us:

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**CHEMICAL AND PHYSICAL PROPERTIES**

	Norm	Klānoilh ISO 20	Klānoilh ISO 32	Klānoilh ISO 46	Klānoilh ISO 68
Physical state		Liquid	Liquid	Liquid	Liquid
Parafinic base		Group II	Group II	Group II	Group II
Color [=] Gardner	ASTM D1544-98	1	6	6-7	7-8
Pour point [=] °F	ASTM D97	-5	-5	-5	-5
Flash point [=] °F	ASTM D92-05A	406 °F	432 °F	417 °F	446 °F
Boiling point[=] °C	ASTM E70	N/A	N/A	N/A	N/A
Specific Gravity [=] gr/ml @ 68 °F	ASTM D1298	0.851 (0.846-0.856)	0.857 (0.855-0.865)	0.860 (0.855- 0.865)	0.865 (0.860-0.870)
Viscosity [=] cSt @ 104 °F	ASTM D445	23.45 (15-25)	33.77 (30-40)	43.66 (43-53)	64 (65-75)
Viscosity[=] cSt @ 212 °F	ASTM D445	5.14 (5-6)	6.09 (6-7)	8.72 (8-9)	10.02 (10-11)
Viscosity Index	ASTM D2270	157	128	184	142
Cooper strip corrosion	ASTM D130, 3hrs @ 100°C	1B (máx)	1B (máx)	1B (máx)	1B (máx)

**CHEMICAL AND PHYSICAL PROPERTIES**

	Norm	Klānoilh ISO 100	Klānoilh ISO 150	Klānoilh ISO 220	Klānoilh ISO 320	Klānoilh ISO 460
Physical state		Liquid	Liquid	Liquid	Liquid	Liquid
Parafinic base		Group II	Group II	Group II	Group II	Group II
Color [=] Gardner	ASTM D1544-98	8	9-10	10	11	11
Pour point [=] °F	ASTM D97	-5	-5	-5	-5	-5
Flash point [=] °F	ASTM D92-05A	446 °F	460 °F	500 °F	525 °F	554 °F
Boiling point[=] °C	ASTM E70	N/A	331 °F	N/A	205 °F	N/A
Specific Gravity [=] gr/ml @ 68 °F	ASTM D1298	0.870 (0.865-0.875)	0.875 (0.870-0.880)	0.882 (0.878-0.887)	0.883 (0.878-0.888)	0.890 (0.885-0.895)
Viscosity [=] cSt @ 104 °F	ASTM D445	96.15 (95-105)	149.21 (145-155)	220.95 (215-225)	318.59 (315-325)	463 (455-465)
Viscosity[=] cSt @ 212 °F	ASTM D445	12.15 (12-13)	16.67 (16-17)	18.93 (18-19)	22.25 (22-23)	30.82 (30-31)
Viscosity Index	ASTM D2270	118	120	96	86	96
Cooper strip corrosion	ASTM D130, 3hrs @ 100°C	1B (máx)	1B (máx)	1B (máx)	1B (máx)	1B (máx)

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## RECOMMENDATIONS OF USE

**Klätenn** Hydraulic Fluids meet or exceed the requirements of the following industrial hydraulic systems:

Denison HF-0, HF-1, HF-2 (including Denison P-46 piston pump and T6C vane pump)

Eaton Vickers I-286-S / M-2950-S

US steel 126 y 127 - General motors LH-04-1,LH-06-1,LH-15-1

DIN 51524 part 2 Cincinnati Milacron P68, P69 y P7

Contact your **Klätenn** service consultant for a proper use for your operation.

## EMERGENCY OVERVIEW

In case of contact, contact your doctor and go to the nearest care center.

In case of eye contact, wash with of water for at least 15 minutes. Keep eyelids open to ensure a good wash directly to the eye and consult your doctor.

Some types of skin may be sensitive to the components of the formula so you may experience a dry skin. It may cause itching, burning or itching in skin wounds exposed to the product.

If there is prolonged contact with the concentrated product, wash the affected area with plenty of water and hand soap. Remove contaminated clothing and wash it before using it again.

If the product is taken orally, do not cause vomiting. Call the doctor immediately.

## HANDLING AND STORAGE

Follow the instructions of your Klätenn consultant for safe handling and storage of the product.

Do not touch or walk through spilled material. Have good manufacturing practices and personal hygiene. In case of mists or vapors during the operation, a good ventilation will avoid any discomfort.

Keep containers closed with their original caps. The containers should be stored indoors at room temperature and in well ventilated places. Empty containers may contain residues or vapors, which can be dangerous. Do not cut, grind, drill or weld the empty drums.

## CONTROL MEASURES

Avoid spills in unsuitable places; in case of accidental spill or leak, contain it and remove from the affected floor. If required, contact emergency personnel. Keep unnecessary people away from the area. Wear suitable protective equipment, if emergency personnel is not available, contain spilled material.

For small quantities use absorbent material (may use dirt in the absence of emergency material) remove the material and place in a closed waterproof container and dispose as industrial waste. For large quantities, make a small dike to prevent the spill from spreading, prevent it from flowing into the sewer or reaching a water passage. Collect the spill with absorbent material and dispose of it as industrial waste.

## WASTE INFORMATION

You will have to comply with federal, state or local regulations for the treatment of this product once used. Prevent entry to waterways, sewers, basements or confined areas. The product used may be contaminated with machine oils, swarf and metal dust.

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