



# DIE CASTING MACHINE LUBRICATION

 **resourceone**  
*Lubricating Your World*

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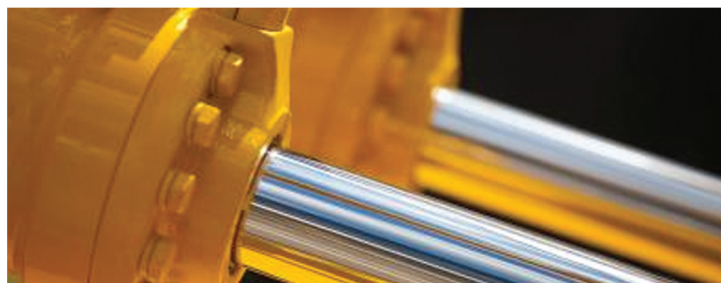
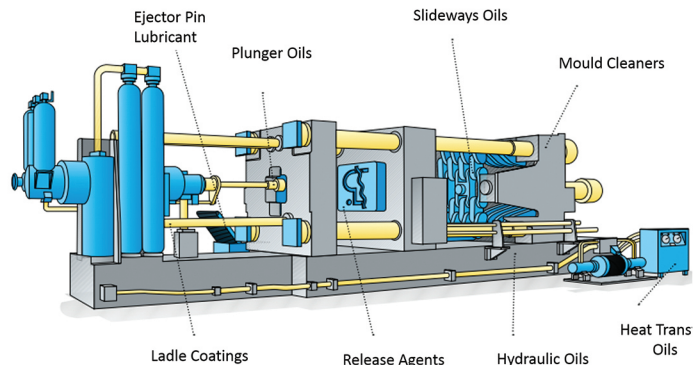


Through years of working closely with the High Pressure Die Casters in the Philippines, as well the OEM's such as Toshiba and Toyo, our company has developed a portfolio of lubricating products that have been tested and proven to be appropriate for your Die Casting Machines.

## HYDRAULIC OILS

### Mineral Based

Our **LUBERITE AW** series is an HLP mineral-based lubricant containing low-zinc Anti-Wear (AW) additives, meeting quality levels of Denison, Vickers and Cincinnati Machines. It is highly recommended for use in high-pressure hydraulic systems, and may also be used for lightly loaded gearboxes and bearings not requiring Extreme Pressure (EP) additives.



	ISO VG 46	ISO VG 68
Viscosity at 40°C (cSt)	47	71
Viscosity Index	6.97	9.08
Flash Point (°C)	104	100
Color/Appearance	Clear	Clear

Available in 20 liter pails and 200 liter drums

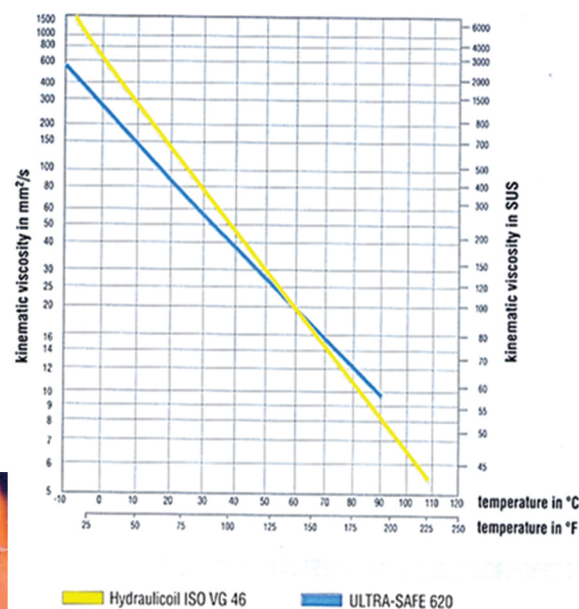
## Fire-Resistant - Water-Glycol Solution

**Petrofer's Ultra-Safe 620** provides virtual total safety from accidental fires due to its outstanding fire-resistance in all hydraulic equipment operating in an environment of molten metal. It also provides a long fluid life due to its resistance to oxidation compared to mineral oils. Moreover, Ultra-Safe 620 possesses excellent lubrication and anti-wear properties.

Appearance	Red Transparent
Specific Gravity (kg/liter)	1.08
Viscosity at 40°C (cSt)	38
Viscosity Index	> 150
Flashpoint (°C)	None
Fire Point (°C)	None
pH	9.4

Available in 20 liter drums

Note - please use Ultra-Safe 620 in systems not exceeding 250 bar and 60°C operating temperatures.



Flammability of mineral oil being sprayed into propane flame



Fire-Resistance of Ultra-Safe 620 into a propane flame

Viscosity Temperature Characteristics vs Mineral Oils



# Fire-Resistant – HFDU Polyolesters (Synthetic)

**Quaker Quintolubric 888-46** is designed to replace anti-wear type mineral oils in applications where Fire Hazards are present. It is also frequently used as an alternative to Water-Glycol HFC fluids, when wear resistance & lubrication is desired, and when superior anti-rust capability is required. The product does not contain any mineral oil, phosphate esters nor water. Field experience has proven that Quintolubric 888-46, when properly maintained, can last up to five (5) years with optimum performance.

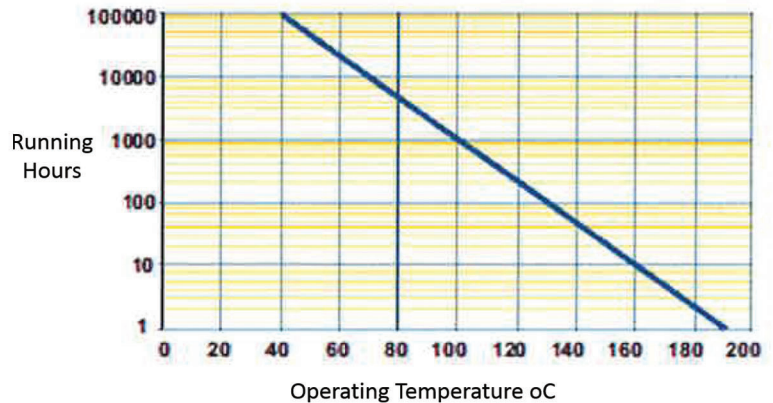
\*Also available in ISO VG 68



Appearance	Yellow to Amber
Specific Gravity (kg/liter)	0.92
Viscosity at 40°C (cSt)	47.5
Viscosity Index	190
Flashpoint (°C)	300
Fire Point (°C)	360
Acid Number (mg KOH/g)	2.0
Corrosion Protection	1a
Vickers Pump Wear Test	<5 mg wear
FZG Fail Stage	> Stage 12

Available in 180 kg drums

\*Quintolubric 888-46 is compatible with all metals except those containing Lead, Cadmium or Zinc (Galvanized)



Compatible Seals Materials

ISO 1629	DESCRIPTION	S*	MD*	D*
NBR	Medium to high nitrile rubber (Buna N, >30% acrylonitrile)	C	C	C
FPM	Fluoroelastomer (Viton®)	C	C	C
CR	Neoprene	S	S	S
IIR	Butyl rubber	S	N	N
EPDM	Ethylene propylene rubber	N	N	N
PU	Polyurethane	C	C	C
PTFE	Teflon®	C	C	C

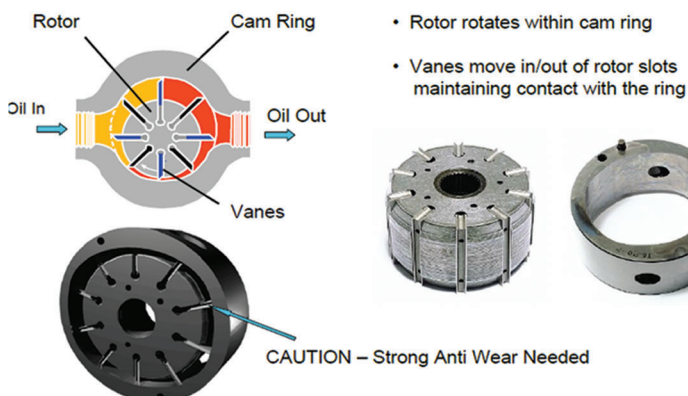
\*\* (S- Static, MD- Mild Dynamic, D- Dynamic)

C = Compatible

S = Satisfactory for short term use, but replacement with a completely compatible elastomer is recommended at the earliest convenience.

N = Not Compatible

## Vane Pumps



**DID YOU KNOW that the Vickers Pump Wear Test (under ASTM D 2882) simulates the wear protection capability of a hydraulic fluid?** Using a Vickers V104/105 C pump, run at a pressure of 105 bars, at a pump speed of 1500 rpm, controlled at 45°C, the Ring and Vane wear is measured (by weight) after a test period of 250 straight hours. See a comparison for wear below.

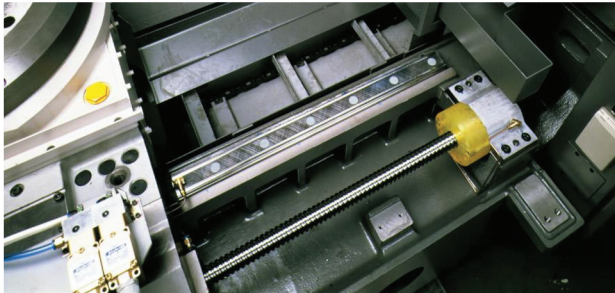
**DID YOU KNOW that Viscosity Index or VI, rates the ability of an oil to maintain a functional lubricating film (viscosity) at elevated temperatures?** A high VI number or rating for an oil, such as 200, denotes a minimal loss in viscosity at high temperatures, whereas a low VI rating, such as 95, indicates a significant loss of viscosity at high temperatures. See VI comparisons between Anti-Wear Mineral Oils, HFC Water Glycol Fluids, and HFDU Synthetic Esters.

	Anti-Wear Mineral Oil ISO VG 46	HFC Fluids (Ultra-Safe 620)	HFDU Fluids (Quintolubric 888-46)
Viscosity at 40°C (cSt)	47	38	47.5
Viscosity Index	103	>150	190

Available in 20 liter pails and 200 liter drums

## SLIDEWAYS OILS

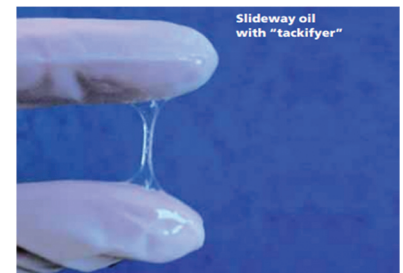
Our **LUBERITE SW** range was formulated to meet the excessive demands for the lubrication of the slideways, toggles, and tie-bars of modern Die Cast Machines. Containing Friction Modifiers, this lubricant minimizes the occurrences of stick-slip at low speeds and high pressures, and provides protection against scuffing and seizures. LUBERITE SW also contains Tackifiers, Demulsifiers, and Anti-Rust additives, ensuring that its performance remains optimum despite the possible exposure from water-miscible die release agents.



	ISO VG 68	ISO VG 220
Viscosity at 40°C (cSt)	65	226
Viscosity Index	8.8	19.88
Flash Point (°C)	107	101
Color/Appearance	Clear	Clear / Amber

Available in 20 liter pails and 200 liter drums

**DID YOU KNOW that using Hydraulic Oils or other Circulating Oils for machine tool slideways may cause premature failure?** Unlike Hydraulic and Turbine Oils, Slideways Oils are specifically blended with tackifiers, ensuring that the lubricant stays in place despite the exposure to fluids and the high vibrations in Die Casting Machines.



### OTHER LUBRICATION FOR DIE-CAST MACHINERY

Heat Transfer Oils	Petrofer Transtherm 525	Heat absorbing circulating oils for use in die-cooling systems, whose temperatures do not exceed 310°C.
Ejector Pin Grease	Tacbecon Moly Plus 2	Grease with solid MoS <sub>2</sub> , providing protection against sliding friction, shock loads and high temperatures.
Anti-Solder Paste	Petrofer Die-Lubric AS	Grease applied to 'Hot Spots' on the die to prevent or remove soldering.
Start-up Paste	Petrofer Die-Lubric ALP	Silver paste applied to dies to protect against soldering especially at start-up, or during cold-shots.
Ladle Coating	Lubrikote Ladle Coat L	Oil based ladle coating designed to prolong coating life vs conventional water-based ladle coatings.

We also have a range of cast-iron Ladles fit for Toshiba and Toyo machines



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### ALSO AVAILABLE:

#### METALWORKING FLUIDS

Die Casting, Forging, Stamping Release Agents  
Rust Preventives and VCI's  
Cutting Oils and Coolants

#### AUTOMATIC LUBRICATORS

#### OIL SKIMMERS

#### SPECIALTY LUBRICANTS AND GREASES

High and Low Temperature Greases  
Chain and Wire Rope Lubricants  
Open Gear Greases  
Synthetic Gear, Compressor, Hydraulic Oils  
Fire Resistant Hydraulic Fluids