The Quintolubric 888 Series are synthetic fluids that contain no water, petroleum oils, chlorinated hydrocarbons or phosphate esters. These products are used in those hydraulic applications where trouble free fluids with a high degree of lubricity and fire resistance are required. This need has typically been satisfied by phosphate ester type fluids, but the Quintolubric 888 Series is now replacing phosphate ester in most applications as it offers many advantages that make these fluids a superior alternative. The Quintolubric 888 Series are being used in a wide variety of hydraulic units, from small welding robots to large blast furnace systems. The key benefits and advantages of Quintolubric 888 Series are outlined below:

1. FIRE RESISTANT

Like phosphate esters, the Quintolubric 888 Series are approved by Factory Mutual Research as Less Hazardous Hydraulic Fluids. It should be noted that while Quintolubric 888 Series fluids have a higher fire point than phosphate esters, their Auto ignition temperature is about 150°C lower than phosphate esters. Therefore if surface temperatures fall in this 150°C window there may be a benefit in the use of phosphate esters. If surface temperatures exceed the auto ignition temperature of phosphate esters, this benefit is lost as both products will ignite, but not propagate a fire.

2. LESS TOXIC

LOW TOXIC: Quintolubric 888 fluids are based on natural fats as raw materials, and are classified as non-toxic by oral ingestion; are not primary skin irritants or corrosive materials; and are not eye irritants.

NO PHENOLS: Phosphate esters can produce phenols when hydrolysed due to contact with moisture. Phenols present an environmental and human health hazard. Quintolubric 888 fluids do not contain and cannot produce phenols or related chemicals.

NO STRONG ACIDS: Moisture hydrolysis of a phosphate ester also liberates phosphoric acid, a strong and corrosive acid. Quintolubric 888 fluids do not contain and do not produce any strong acids which are corrosive to operators and hydraulic systems.

LESS HAZARDOUS FUMES/SMOKE: When phosphate esters do burn, they generate large
amounts of dense, toxic smoke which hampers fire fighting. Quintolubric 888 Series fluids produce a minimal volume of smoke. Ask us for further details on the toxicity of fire resistant hydraulic fluids to better understand the toxicity benefits of Quintolubric 888 Series fluids.

3. SUPERIOR OPERATIONAL PROPERTIES

EXCELLENT VISCOSITY INDEX (VI): Phosphate esters have a low VI, that is their viscosity changes drastically with temperature. Hence they have a limited operational temperature range and suffer from low temperature start-up difficulties. In contrast the VI properties of Quintolubric 888 Series are outstanding, giving a wide operational temperature range.

BETTER SEAL COMPATIBILITY: The Quintolubric 888 Series are compatible with virtually all seal and gasket materials. The only exceptions are Butyl, Neoprene and E.P. Rubbers, which may have a reduced service life. Phosphate esters, on the other hand, are well known for their chemical attack on clothing, shoes, and seals/gaskets; special and expensive materials such as Viton are required with these fluids.

BETTER SPECIFIC GRAVITY (Density): The Quintolubric 888 fluids have a similar specific gravity to petroleum oils, while phosphate esters are heavier than water. High specific gravity requires increased pump suction lift, and has a tendency to cavitate pumps. While this can be reduced by de-rating pumps, it is achieved at the expense of system efficiency. Quintolubric 888 Series do not require any such pump modifications, and have equivalent lubrication to petroleum oils when tested to ASTM D-2882.

4. MORE ENVIRONMENTALLY FRIENDLY

Quintolubric 888 series fluids are biodegradable and have low aquatic toxicity. The specific gravity of Quintolubric 888 Series allow them to split readily and rapidly from water and float, so that separation from waste water can be accomplished efficiently by conventional surface skimming. The chemical nature of Quintolubric 888 allows collected waste oil to be utilised or disposed in a similar manner to petroleum oils.

Phosphate esters are biodegradable to a degree, but their degradation products are toxic to aquatic life. Due to their high specific gravity they do not float on water making them difficult to treat or remove by conventional skimming techniques. This poses a unique environmental danger as phosphate esters can enter water ways undetected and leave a trail of devastation as they slowly liberate their toxic by-products of hydrolysis and biodegradation from the bottom of water ways.

5. LESS COST

Quintolubric 888 Series offer several cost savings over phosphate esters including lower unit price per litre, longer equipment (pump and seal) life, and reduced fluid consumption as leakage
is reduced with the **Quintolubric 888** fluids better seal integrity and VI Properties.