

Fire fighting

Fire-resistant hydraulic fluid has been released to the mining industry.

By Vetti Kakulas

Managing potential fire risks is an issue every mining company has to be constantly aware of. Fire incidents on mobile plant, such as excavators, loaders and mining dump trucks, are caused by component failure or insufficient maintenance. To prevent fires occurring, Quaker Chemical's Quintolubric 888 series fluid has been released to the Australian mining industry.

"You don't expect a fire until you have one," Quaker Chemical Australasia sales and product manager Felix Radu said.

"Xstrata lost two shovels to fires – each shovel is about \$10 million."

US-based Quaker Chemical Corporation said its product is the world's first fire-resistant lubricant.

Quintolubric 888-46 and 888-68 products are said to be working in more than 50,000 fixed systems worldwide.

Latest figures show that Quaker Chemical has brought 400 tonnes of the Quintolubric product into Australia.

Developed in the 1970s, the fire-resistant polyol ester hydraulic fluid is suitable for steel, non-ferrous, mining, mobile equipment, automotive and power generation industries.

Fires may occur from an oil filter or hydraulic hose bursting, causing hydraulic mineral oil to spray over the engine or exhaust pipe, which ignites the equipment.

"To prevent these events occurring, more equipment contains standard fitting fire suppression systems, but this is not always enough to stop the flames destroying the



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equipment," Radu said. "Quaker's unique solution is to eliminate the source of fire rather than to fight the fire."

Quintolubric was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where there were fire hazards.

Radu said it could be used in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operations.

It does not contain water, mineral oil or phosphate ester, and can be used with hydraulic components from all major equipment manufacturers. The Quintolubric

888 series is endorsed by major original equipment manufacturers such as Caterpillar, Komatsu, Volvo, Liebherr and hydraulic systems company Eaton Vickers.

Quintolubric 888-46 is compatible with iron and steel alloys, and most non-ferrous metals and their alloys.

It is used as a coupling fluid in the mining industry.

"If the temperature goes over 450 degrees it can catch on fire, but it will self-extinguish," Radu said.

"It has a delayed ignition. It's fire-resistant, biodegradable and it has the same performance standards to mineral oils."

One disadvantage to Quaker's products is the cost. It's estimated that Quintolubric costs two-and-a-half times more than mineral oils.

The products are widely used at Indian underground mining operations for side dump loaders, load haul dumpers and continuous miners.

BHP Billiton and Rio Tinto currently use Quaker's products for mobile equipment and smelters.

Rio is said to be using Quintolubric 888 at its Kestrel mine, an underground coal mine in central Queensland.

Quaker Chemical is based in Philadelphia, US, with Australian headquarters in Sydney, New South Wales.

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