




OUR STRONGEST LUBRICANT FOR THE HEAVIEST DEMANDS

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.®

 **Castrol**
MOLUB-ALLOY®



IN DEMANDING ENVIRONMENTS, CAN YOUR LUBRICANT PROTECT YOUR CRITICAL EQUIPMENT?

TRUST OUR STRONGEST LUBRICANT TO TACKLE YOUR HEAVIEST LOADS

Every day you subject your equipment to extreme loads, pressures and temperatures, as well as constant stress in harsh environments. Heavy-duty applications demand tough protection. If you fail to adequately lubricate your surfaces, you put your valuable equipment at risk of wear and failure – not to mention a loss of profit and productivity.

The Castrol® Molub-Alloy® product range has the power to keep your vital equipment working for longer, offering robust friction reduction no matter the application. These advanced multi-purpose products incorporate several compounds containing microscopic solids that bond to the surface of metal under heavy and shock loads, separating frictional surfaces to prevent metal-to-metal contact.

Castrol Molub-Alloy has been formulated to help you:

- Meet your unique needs and conquer your toughest challenges
- Maximize your productivity thanks to a reduction in downtime
- Lower costs by preventing component failure and lowering lubricant consumption

CASTROL® MOLUB-ALLOY®: PRODUCTS FOR THE TOUGHEST JOBS

Whatever your industry challenges, when there is a need for solutions with lubricating solids, the Castrol Molub-Alloy range of products can help strengthen your operations.

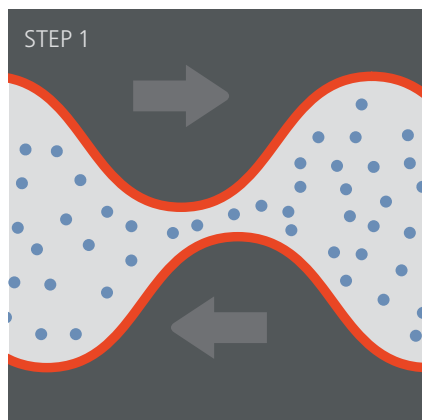
This family of mineral oils, greases and pastes offers solutions for use in the industrial manufacturing, mining, and quarrying sectors, among others.

Castrol Molub-Alloy can effectively lubricate a wide range of parts from gears and bearings to conveyors and chains. It can empower you to overcome common challenges, including poor equipment performance and unscheduled downtime.

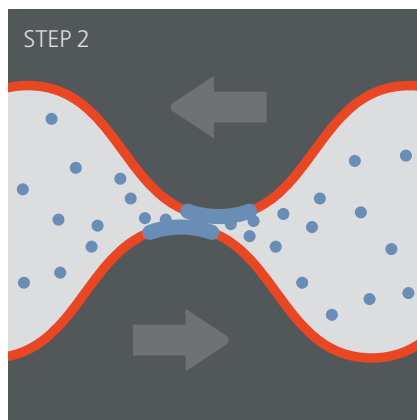
The range is developed specifically to perform in the harshest conditions; its multipurpose qualities allow you to consolidate within a family of products – enhancing storage and inventory efficiency, without compromise.

STANDARD LUBRICANT

EXTREME PRESSURE (EP) / ANTI-WEAR (AW) LUBRICATION

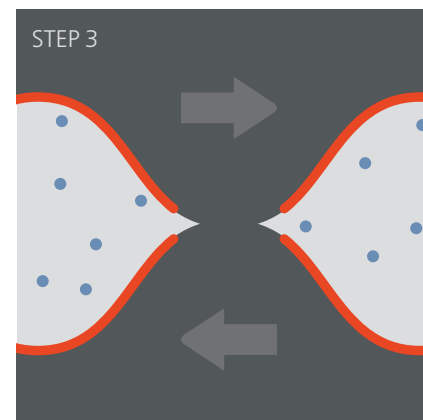


Here, we see two metal surfaces moving relative to each other under full fluid film separation – or hydrodynamic lubrication. Soluble EP/ AW additives float freely in a non-reactive state. The two metal surfaces retain their natural oxide layers.



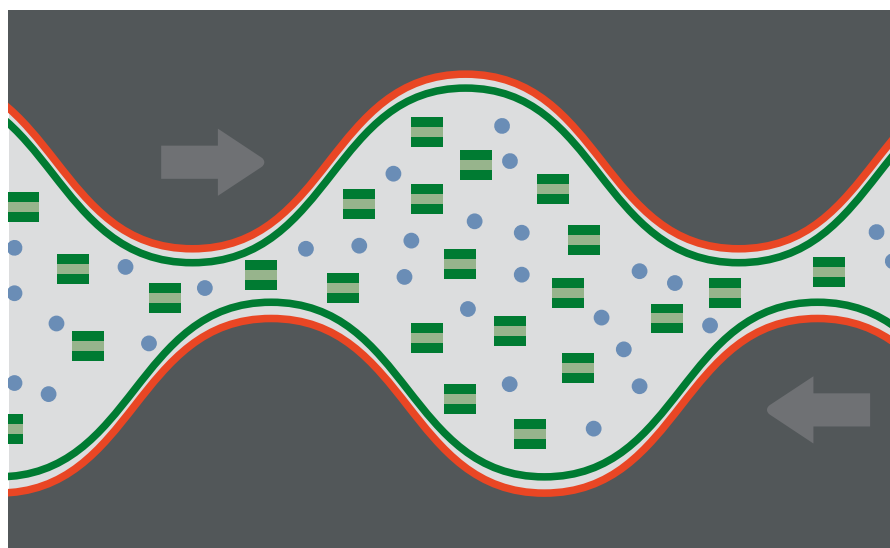
When temperature or load increases, or velocity decreases, asperities come into contact and the natural oxide layer is removed. As bare metal is exposed, the EP additives activate to form a protective film.

- EP/AW Additives
- Natural Oxide Layer



Under further pressures, EP films can become overloaded and the additives are exhausted. Without them, the contacting asperities weld together – and metal is removed as the bonds break, causing scuffing.

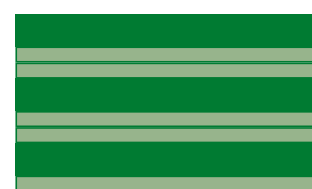
CASTROL® SOLID FILM LUBRICATION, PROTECTING YOUR EQUIPMENT



Castrol Molub-Alloy has been formulated with a unique and innovative additive that contains solid elements which stack on top of each other. These solids form a layer that remains extremely strong when placed under pressure, yet shears easily as metal moves. This prevents bonding and subsequent damage.

Unlike soluble extreme pressure (EP) additives, no chemical reaction takes place. Our additive, however, works into the asperities of metal surfaces to provide optimum protection.

- Molybdenum disulphide (MoS_2)



Structure of layers



Low coefficient of friction between the sulphur layers

The effect of solids in lubricating systems is comparable to cards stacked on top of each other. When you push down on them, they are very strong and can take high loads. But as they slide in either direction, they shear easily to prevent damage.

AN EXTREME LUBRICANT WITH EXTREME BENEFITS

CASTROL MOLUB-ALLOY OFFERS ADVANCED STRENGTH AND OUTSTANDING PROTECTION AND CAN BRING BUSINESS BENEFITS INCLUDING:



COST SAVINGS

Castrol Molub-Alloy has the potential to drastically reduce maintenance costs. One of our customers was able to cut operating expenses by 92% saving roughly \$1.2m. They achieved this by increasing the working life of both parts and lubricant through minimizing equipment damage and rapidly reducing power consumption. In another case, the failure rates of bearings were reduced by 94% on run-out tables of a continuous caster at a large steel producer. This resulted in savings of roughly \$200,000 due to prolonged equipment lifetime.



PRODUCTIVITY IMPROVEMENTS

The Castrol Molub-Alloy range contains compounded lubricating solids that can reduce friction, helping to extend the lubrication cycle. A major coal-mining company was experiencing accelerated wear of dragline components, such as house rollers and upper and lower rails, an enormous amount of labour was required for replacement resulting in unexpected downtime. Castrol Molub-Alloy products increased the operating hours from 70,000 to more than 100,000 and increased component life by 43%, leading to increased machine availability and productivity.



PEACE OF MIND

Castrol Molub-Alloy has a history of unparalleled performance dating back to the mid-1940s and has been used by companies like yours to help reduce bearing failures, lower grease consumption and extend equipment life.

Contact us today at 888-CASTROL.

All products and services supplied are provided under Castrol Industrial's standard conditions of sale. Please consult your local Castrol expert if you require any further information.

Castrol and the Castrol logo are trademarks of Castrol Limited, used under license.

Castrol Limited

Copyright © 1999-2022

www.castrol.com/industrial-us

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.®


MOLUB-ALLOY®