



Aries®

Pneumatic Percussion Tool Lubricant

Product Data Sheet



Customer benefits

Maximum working life of equipment

Special EP and high film strength oiliness additives withstand shock loads under boundary lubrication conditions and protect components against wear.

Protects surfaces in wet conditions

Superior emulsification properties prevent water wash-off from critical areas when operating with wet air, or during hollow rod "wet drilling" operations. Effective rust and corrosion inhibitor system protects critical components in wet air or "wet drilling" operation.

Trouble-free operation

Highly refined base oils with low carbon forming characteristics and special oxidation inhibitor prevent the formation of sludge and deposits which can produce sluggish valve action. Effective anti-foam inhibitor resists foaming in air-line lubricators to enable easy control of oil feed by ensuring regular supply of lubricant to the tool. Special anti-misting additive minimizes oil fog formation in equipment exhausts.

Applications

- Percussion-type air tools operating under wet or dry conditions, including:
 - Rock drills
 - Concrete and pavement breakers (jackhammers)
 - Tampers
 - Rammers
 - Riveting and chipping hammers, etc.
 - Centralized lubricators of larger crawler-mounted drill rigs
- Ambient temperature guidelines for adequate atomization of air-line lubricators:
 - Aries 46 : -35°C to 5°C
 - Aries 100 : 5°C to 25°C
 - Aries 150 : Above 25°C
 - Aries 320 : Above 30°C

Product features:

- Aries® is a high performance lubricant for percussion-type air tools, which is formulated from highly refined mineral oils, EP, oiliness and tackiness additives, emulsifiers, rust and corrosion inhibitors, and anti-foam and anti-fogging agents.

Product Specifications

ARIES®				
KEY PROPERTIES				
ISO Grade	46	100	150	320
Copper Strip Corrosion, 3 hrs @ 100°C	1a	1a	1a	1a
Pour Point, °C	-30	-27	-21	-15
Viscosity,				
— mm ² /s @ 40°C	44.0	96.0	143	305
— mm ² /s @ 100°C	7.1	11.5	14.9	23.4
Viscosity Index	121	107	104	96

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide.

Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal.

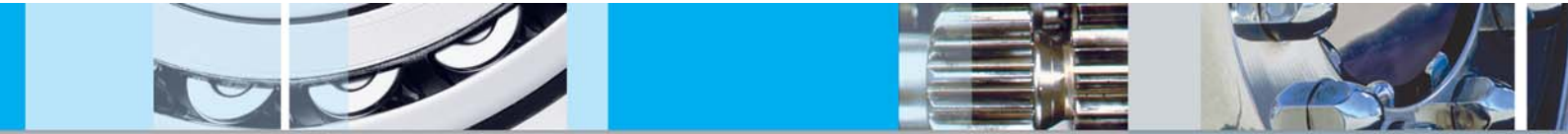
To obtain a MSDS for this product, visit: www.caltexoils.com.

Service considerations

Rock drills are precision built units with close tolerance parts that must operate under heavy loads in adverse conditions. During operation, rock drill temperatures may vary widely from low ambient to localized hot spots, particularly when a drill is run dry or "on cushion", such as when withdrawing the rod from a hole. Boundary lubrication conditions often prevail due to the sliding action of the heavily loaded piston, which is further accentuated by its rapid reciprocating motion. Moisture, in the form of wet air operating systems or leakage of water past seals during hollow rod "wet drilling operations", can cause rusting and wash the lubricant from critical areas.

In addition to supplying drilling energy, most rock drills use the compressed air to also carry fine droplets of misted oil to the moving parts of the drill. Oil is metered into the air stream through an air line oiler or venturi. This oil must be carefully metered to provide adequate lubrication, since insufficient or inadequate lubrication can cause rapid drill failure due to wear.

In the case of air-line lubrication, correct viscosity grade selection is necessary for acceptable lubrication. The amount of air picked up and carried by the air stream, in air-line lubricators, depends largely on the viscosity grade of the selected lubricant and the temperature of the lubricant in the lubricator. Lubricant temperature will be determined by the air temperature surrounding the lubricator and the temperature of the compressed air. Where tools are not operated continuously, or the air receiver is located far enough from the tools such that the compressed air cools before reaching the lubricators, the ambient air temperature is generally the controlling factor in viscosity grade selection.



Service considerations - Cont.

In the absence of specific equipment manufacturers' recommendations on grade selection, the guidelines shown in the "Applications" section will assist in ensuring that adequate atomization is obtained in the air-line lubricator. In addition to correct viscosity grade selection, a uniform, dependable supply of lubricant is extremely important for extended life and reliable operation from percussion-type air tools.

Except for the smallest tools, air-line lubricators of the proper size should be installed at the correct distance from the tool (about 3 to 4 metres). Maintenance schedules should be arranged so that the lubricators are refilled at the correct intervals to prevent the tools from being run dry. Periodic blowing of the air lines to remove collected water and dirt will also assist in obtaining good lubrication.

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by:
Chevron Global Lubricants
- Asia Pacific