Water soluble lubricants for copper and other non-ferrous metal-drawing, rolling and annealers

Introduction
An extensive and robust soluble range of lubricants. Lubricool™ is designed for drawing non-ferrous wire and provides consistent and reliable performance over a wide variety of conditions. The range uses the latest synthetic technologies and has been developed for drawing applications from rod to superfine. Lubricool™ is currently used by many of the World’s leading cable and non-ferrous wire producers. Lubricool™ is also recognised and endorsed by many machine manufacturers such as NIEHOFF, SAMP and SICTRA.

Features and benefits
- Excellent lubrication properties reduce wear on dies and cones and increases drawing speeds.
- Provides an exceptionally smooth, bright and clean finish to the drawn wire, making it suitable for annealing and plating processes as well as the manufacture of insulated cables.
- Excellent emulsion stability and resistance to soap formation maximises sump life.
- Increased lubricity of the emulsion reduces wire break frequency.
- Superior detergent properties maintain the machines in a clean condition.
- Additive package combination produces a high resistance to excessive foaming and bacterial and fungal attack.
- Emulsion structure produces excellent filterability on both media (paper) type and hydrocyclone systems.
- Superior anti-corrosion properties to protect machine parts and the wire surface.

Pack sizes
Lubricool™ products are available in 205 litre drums and 1000 litre IBCs.

The Lubricool™ Selector Chart

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Application</th>
<th>Additional Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rod Breakdown Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubricool 44X</td>
<td>Extremely high lubricity for larger rod sizes, shaped wire &amp; boxes</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lubricool 35</td>
<td>Next evolution in rod breakdown lubrication, offering higher lubrication and longer sump life</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lubricool 22G</td>
<td>Rod breakdown lubricant long proven to provide excellent performance</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lubricool 11</td>
<td>High cleanliness formulation</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Multiwire Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubricool 316</td>
<td>Multiwire lubricant long proven to provide excellent performance</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lubricool 319</td>
<td>Higher lubrication multiwire lubricant</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lubricool 320</td>
<td>Highest technology, multiwire lubricant</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Superfine Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubricool 250B</td>
<td>Synthetic lubricant for high cleanliness and excellent lubrication</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

Additionals Products
- Lubricool AC: A semi-synthetic additive specially formulated for use in the continuous annealing systems of drawing machines where wire brightness and cleanliness are particularly important.
- Metaclean MEC-50: An emulsion conditioner, which improves the cleaning power, stability and generally revitalises the condition of aged emulsions.
- Metaclean AA: A highly active fluid corrosion inhibitor for the protection of copper wire, recommended for use where the risk of oxidation and tarnish is heightened as a direct result of climate and process conditions.

The product information in this publication is based on knowledge and experience at the time of printing. There are many factors outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility. Issue date: 22/01/18
Alumol™ and Metarol™

Hot-rolling and wire-drawing lubricants for pure aluminium and aluminium alloy rods

Introduction

Alumol™ is a range of high-performance lubricants specifically developed for the drawing of pure aluminium and aluminium alloy wire. All products in the Alumol™ range contain an optimised combination of natural and synthetic lubricity additives. The Alumol™ range’s high affinity for aluminium provides exceptional film strength to deliver outstanding surface finish and die life. The use of high-purity base oil and the latest antioxidant technology minimises thermal degradation and significantly extends service life. All Alumol™ lubricants have the ability to absorb small quantities of water – preventing problems such as die burns and surface scratching that are usually caused by ingress of moisture. The latest antioxidant technology minimises thermal degradation and significantly extends service life.

Viscosity/lubricity control additives (Alumol™ VRX)

The length of lubricant life, when drawing aluminium, is primarily determined by the increase in viscosity and metal fines content due to die wear. Using Alumol™ VRX, an innovative additive from Metalube, helps to both reduce lubrication levels and boost lubricity by replenishing lubricity lost during use. By reducing viscosity, filtration methods such as centrifuging and settling are made more efficient, slowing for greater removal of fine aluminium particles. These benefits promote an extended lubrication life and a more consistent performance.

Filtermet centrifugal cleaning unit (FCCU)

Metalube recommends the use of Filtermet FCCU centrifugal filter systems which remove metal particles primarily determined by the increase in viscosity and metal fines content during use. Using Alumol™ VRX, an innovative additive from Metalube, helps to both reduce lubrication levels and boost lubricity by replenishing lubricity lost during use. By reducing viscosity, filtration methods such as centrifuging and settling are made more efficient, slowing for greater removal of fine aluminium particles. These benefits promote an extended lubrication life and a more consistent performance.

Features and benefits

- Provides optimum boundary lubrication to protect dies and provide outstanding surface finish on drawn wires.
- Excellent resistance to thermal degradation extending service life.
- Low viscosity aids separation of aluminium fines and pumpability.
- Able to absorb some moisture without compromising lubrication performance.
- Functions well with both the FILTERMET centrifugal cleaning system and Alumol™ VRX to further extend life and maximise performance, delivering significant cost savings.

Pack sizes

Alumol™ products are available in 205 litre drums and 1000 litre IBCs.

The Alumol™ Package

In order to improve drawing performance and reduce lubricant costs, Metalube® has developed a package of products for drawers of pure aluminium and aluminium alloy wires.

Drawing lubricants

A specially selected product from the Alumol™ range. These products are recognised and endorsed by the world’s leading drawing machinery manufacturers and are used globally with excellent results.

Viscosity/lubricity control additives (Alumol™ VRX)

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Example of Alumol Package extended life based on 4000L producing 3000TPA

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<tr>
<th>Product</th>
<th>Description</th>
<th>Application</th>
<th>Roll Life</th>
<th>Wire Drawing</th>
<th>Extrusion Type</th>
<th>Machine Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metalone</td>
<td>High viscosity oil for bull blocks and die boxes</td>
<td>1000</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metalone 550</td>
<td>High viscosity oil for bull blocks and die boxes excellent performance</td>
<td>500</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumol 155</td>
<td>Medium viscosity oil for slip machines on high speed slip machines</td>
<td>180</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumol 145</td>
<td>Medium viscosity oil for slip machines on high speed slip machines</td>
<td>120</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumol 50</td>
<td>Low viscosity oil for non-slip wire drawing</td>
<td>60</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumol 30</td>
<td>Low viscosity oil for fine wire drawing</td>
<td>30</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additive Products

Alumol VRX

Viscosity reducer and lubricity improver for aluminium wire drawing lubricants

Additive EP

Lubricity enhancing additive

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Metalube® has a comprehensive range of products designed to suit a variety of needs for non-ferrous wire drawing. Take a look at the range to find the right one for your process.

Alumol™ and Metarol™ – High-performance, hot-rolling and wire-drawing lubricants for pure aluminium and aluminium alloy.


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