

Technical Data

Lubricool™ 960

Mineral oil-free copper wire drawing lubricant



METALUBE®

Description

Sustainability is at the core of Lubricool 960. This fully synthetic, mineral oil-free lubricant is designed for modern wire drawing, helping manufacturers reduce environmental impact. By eliminating mineral oil, it supports cleaner production, easier waste management, and improved operator and environmental safety, without compromising performance.

Lubricool 960 is emulsifiable and ideal for high-speed drawing of intermediate, fine, and superfine copper wire. Its blend of natural and synthetic additives minimises wear on dies and capstans while delivering an outstanding surface finish. The proprietary emulsifier system resists degradation from metals, metal ions, and water hardness salts, extending service life, reducing maintenance, and importantly, keeping machines clean.

Features and benefits

- Sustainability at its core: Mineral oil-free formulation supports cleaner production, easier waste management, and improved operator and environmental safety
- Optimal lubrication: Protects tooling and ensures an exceptional surface finish
- Superior cooling: Provides exceptional heat dissipation to keep dies and wire cool, reducing wear and improving process efficiency
- Excellent copper soap resistance: Minimises build-up for smoother operation and longer tool life
- Machine cleanliness: Maintains clean machinery and excellent bacterial resistance

Recommended instructions for use

Best used in low hardness and low salt content water but can be used in waters with up to 200 ppm CaCO₃ total hardness. Ideally, use water with an initial hardness of 60-100 ppm CaCO₃ to prepare a fresh emulsion, with de-ionised water being used for subsequent replacement of evaporation losses, spillage etc. Bulk emulsion operating temperatures of 35 – 45 °C are recommended.

To prepare an emulsion always add Lubricool 960 concentrate to water with adequate agitation – never add water to the concentrate.

For further information consult the Metalube wire drawing lubricants guide. Refer to the safety data sheet for guidance on safe handling, storage and disposal.

Storage

Store Lubricool 960 out of direct sunlight and protect from frost. Storage temperature should be controlled to between 5°C and 35°C.

The most up to date shelf-life information for Metalube products can be found on the certificate of analysis issued at the time of manufacture.

Pack sizes

Code	Pack
F103610	205 Ltr barrel

Dilution range

Application	Dilution
Intermediate wire	8 – 10%
Fine wire	6 – 8%
Superfine wire	2 – 4%
Annealer	0.5 – 1.5%

Concentration monitoring

Emulsion concentration is generally measured using a refractometer measuring on the Brix scale.

To obtain the actual concentration multiply the refractometer reading by the correction factor 2.10.

e.g.

Refractometer reading	= 3
Correction factor	X 2.10
Actual dilution	= 6.30%

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Property	Test method	Result
Appearance	MSTM 1	Clear amber oil
Emulsion Appearance (5% de-ionised water)	MSTM 9	Fine translucent emulsion
Emulsion pH (5% de-ionised water)	MSTM 18	9.3
Conductivity at 25°C (5% de-ionised water)	MSTM 34	1250 µS
Density at 20°C	MSTM 23	0.99 g.cm ⁻³

Note: these values are typical only and do not constitute a specification

Limited warranty information

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective and fully satisfactory for the intended end use. We accept no liability for any loss and/or damage arising from a failure to store our products in accordance with the information contained in this technical sheet. Metalube Group's sole warranty is that our products will meet their quality control specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. To the fullest extent permitted by applicable law, Metalube Group specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Metalube Group disclaims liability for any incidental or consequential damages.

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