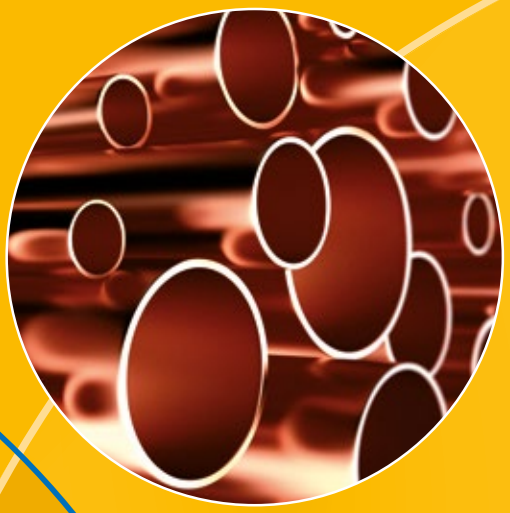

METALUBE®

Tubol™

DRAWING LUBRICANTS
FOR COPPER TUBES

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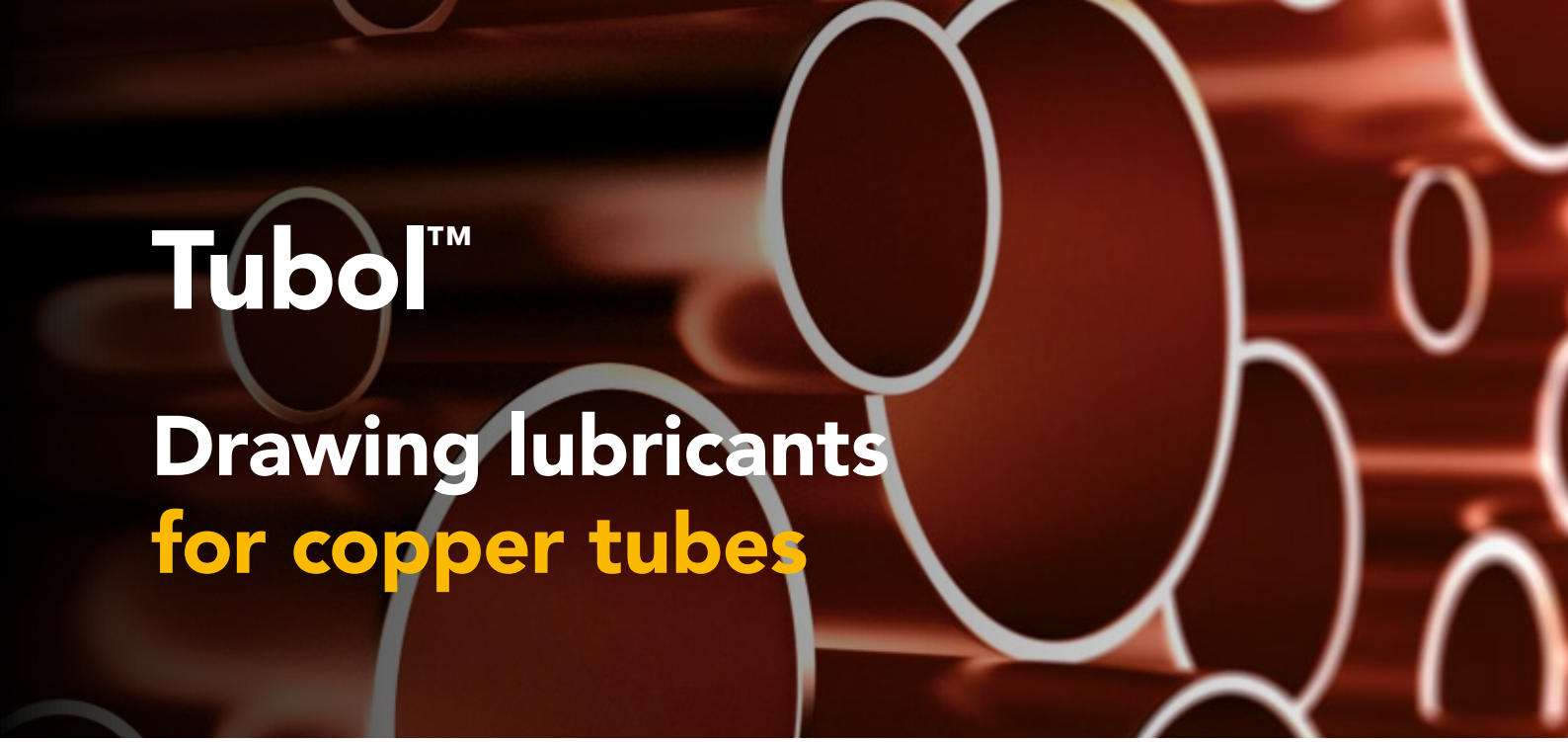
DRAWING LUBRICANTS FOR COPPER TUBES

Global specialists in high-performance lubricants

For over 30 years METALUBE® has developed and delivered high-quality lubrication solutions for specialist industrial applications. With headquarters in Manchester, United Kingdom, METALUBE® operates a fully integrated lubricant manufacturing facility, and state-of-the-art laboratory from which it delivers to customers in over 90 countries around the world.

Research and innovation are at the heart of METALUBE®, with state-of-the-art laboratories and a team of development chemists ensuring that products deliver optimum performance for customers.

Our success lies in our ability to be flexible, offering unrivalled technical and after-sales support. It is our priority for customers to run at peak efficiency – and for 30 years METALUBE® has delivered a world-class service and superior-performance products.



Tubol™

Drawing lubricants for copper tubes

Introduction

A comprehensive and industry specific range of lubricants specifically designed for use in drawing non-ferrous tubes used for ACR, sanitary and engineering applications. Synthetic and semi-synthetic technology is employed to meet the demanding specifications of users and their customers' requirements. The range is endorsed by leading tube and equipment manufacturers in Europe and Asia.

Features and benefits

- Optimum lubricating properties to ensure long tool life and enhanced surface finish of the drawn tube.
- Excellent bright annealing characteristics in heat treatment processes with inert, dry atmospheres.
- Low fume characteristics during high speed drawing.
- High viscosity index maintains lubricating film even at elevated temperatures.
- Lower carbon residues compared with more conventional polymer oils.

The Tubol™ range

Due to the differing production processes in tube mills, often a bespoke lubricant programme is required to meet individual demands. We have a comprehensive range of tube mill lubricants for spinner blocks, bull blocks, draw benches, cascade lines, Pilger mills, extrusion presses and cast and roll applications.

Please contact our representatives to allow us the opportunity to view your process and to recommend a lubricant which will enhance your throughput and productivity.

The Tubol™ Selector Chart

Product	Description	Viscosity (40° C)	Pilger Mill	Cast + Roll	Extrusion	Primary Breakdown		Spinner Blocks		Finishing		Inner Groove	
						OD	ID	OD	ID	OD	ID	OD	ID
Primary Process Lubricants													
Tubol™ ML40	Synthetic water based mandrel lubricant for the extrusion of copper tube.				✓								
Tubol™ 333	Water miscible lubricant for cast + roll lines.			✓									
Tubol Decoiling Fluid	Applied prior to annealing this product prevents the sticking/welding of tightly wound tubes for easier decoiling by the end user. Operating temperature is 400 C to 520 C.												✓
Tubol™ Extrusion Fluid	Copper tube extrusion quenching additive.				✓								
Tubol™ Pilger Fluid K	Water miscible Pilger mill lubricant for the production of copper tubes.		✓										
Semi-Synthetic Drawing Lubricant Range													
Tubol™ 615	Low viscosity lubricant for final pass drawing or sinking operations.	30 cSt								✓			
Tubol™ 70S	Low viscosity drawing lubricant for copper tube,rod and section.	70 cSt								✓		✓	
Tubol™ 700	A low/medium viscosity semi-synthetic lubricant for the cold drawing of non ferrous tube, bar and sections.	850 cSt				✓	✓	✓	✓				
Tubol™ 193	A semi-synthetic lubricant, with optimum viscosity characteristic for ID and OD lubrication passes on high speed spinner	2000 cSt				✓	✓	✓	✓				
Tubol™ 431	Formulated for both ID and OD lubrication this hybrid semi-synthetic mid viscosity lubricant delivers the optimum balance of lubrication and bright anneal characteristics. Ideally suited for the production of HVAC copper tubes.	2100 cSt				✓	✓	✓	✓				
Tubol™ 2710 DM	A semi-synthetic high viscosity lubricant for cold drawing non ferrous tube, rod and profiles. Recommended for high speed spinner blocks and Schumag type equipment. Highly sheer stable so suitable for drawing of long tube lengths.	5000 cSt				✓	✓	✓	✓				
Tubol™ 1962JR	High viscosity lubricant, ideally suited for draw benches and high speed spinner blocks.	5500 cSt				✓	✓	✓	✓				
Tubol™ 350 JR	A semi-synthetic high-viscosity lubricant for cold drawing non-ferrous tube, rod and profiles. Developed for use in the arduous conditions, where a thicker lubricant is required to be stable in higher ambient temperatures.	6900 cSt				✓	✓	✓	✓				
Fully Synthetic Drawing Lubricant Range													
Tubol™ 203	Low viscosity lubricant, ideally suited for the manufacture of HVAC tubes.	125 cSt							✓		✓		✓
Tubol™ 2000AL	Optimum viscosity characteristics, ideally suited for the manufacture of HVAC tubes on high speed spinner blocks.	2000 cSt				✓	✓	✓	✓		✓		

METALUBE®

Certificate Number 2367
ISO 9001, IS0 14001, OHSAS 18001

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