



**METALUBE®**

**Tubol™**

A COMPREHENSIVE  
RANGE OF LUBRICANTS FOR  
NON-FERROUS TUBE DRAWING



# Tubol™

## Non-ferrous Tube Drawing Lubricants

### Introduction

The Tubol™ range of non-ferrous tube drawing lubricants has been developed to deliver consistent, high-performance lubrication at every stage of the tube drawing process. From mother tube cast and roll, billet casting and extrusion, through pilger milling, cascade and spinner blocks, to annealing, Inner Groove Tube (IGT) and final pass operations, Tubol™ provides a complete lubrication solution for tube drawing applications.

Formulated using advanced mineral and synthetic base oils, combined with the latest additive technology, Tubol™ lubricants are engineered to excel under the rigorous conditions of modern tube drawing while meeting customer and process requirements.

Manufactured in the UK and supplied worldwide, our high-performance tube drawing lubricants are trusted by industry-leading manufacturers who have relied on Metalube for decades to deliver outstanding product quality, performance and technical support.

### Features and benefits

- Minimal fume emissions for a safer working environment.
- High viscosity index products for the initial drawing process, to maintain the necessary lubricating film at high speed and temperature.
- Used for both Outer Diameter (OD) and Inner Diameter (ID), the Tubol™ range helps extend equipment life and provides a high quality and bright tube finish with low carbon residue.
- High quality base oils and latest additives technology offer excellent drawing performance and finished product quality.
- Excellent bright annealing compatibility in inert, dry atmospheres.

### Pack Sizes

Tubol™ products are available in 20 litre polys, 200 litre barrels and 1000 litre IBCs.

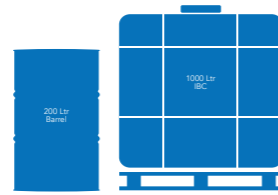
# Primary Process Lubricants

## TUBOL™ ML40

Synthetic water based mandrel lubricant for the extrusion of non-ferrous tube

- Reduced carbon residue on the internal diameter of the mother tube
- Graphite and oil free providing cleaner working environment
- Contains biocide to reduce the risk of contamination
- Supplied ready to use for convenience but also ready dilutable if required
- Formaldehyde Free

TUBOL™ ML40	Product Code
200ltr Barrel	F405525
1000ltr IBC	F405520

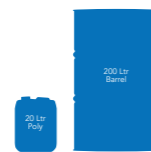


## TUBOL™ DE-COILING FLUID

Non-ferrous tube process fluid

- Prevents sticking/welding of level wound coils during the annealing process
- Eases pay-off/de-coiling by the end-user during manufacture of air-conditioning/refrigeration systems
- Reduces surface damage/scratching of the tubes during transportation and de-coiling
- No carbon deposits left on the tube surface after annealing
- No staining or corrosion of the tube surface after the annealer

TUBOL™ DE-COILING FLUID	Product Code
20ltr Poly	F404808
200ltr Barrel	F404825

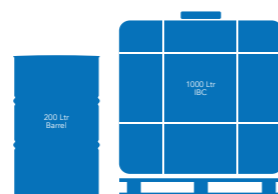


## TUBOL™ EXTRUSION FLUID

Extrusion quench additive

- Helps to produce consistent bright coloured shells
- Good anti-corrosion characteristics on non-ferrous components of the quench tank
- Assists in protecting the surface finish of the newly extruded material, prior to drawing
- Low carbon residues
- Aids the initial drawing pass

TUBOL™ EXTRUSION FLUID	Product Code
200ltr Barrel	F401325
1000ltr IBC	F401320



## TUBOL™ PILGER FLUID K

Soluble oil for pilger mills

- Forms stable semi-translucent emulsions
- Excellent bright annealing characteristics in heat treatment processes with inert, dry atmospheres
- Good anti-corrosion characteristics on mill components
- Superior lubrication characteristics
- Good tramp oil rejection properties i.e. from leaking hydraulic oil, open gear lubricant etc
- Formaldehyde Free

TUBOL™ PILGER FLUID K	Product Code
200ltr Barrel	F404625



## TUBOL™ PR FLUID

Pilger and rolling mill lubricant

- Excellent bright annealing characteristics
- Non-staining and stable emulsion
- Superior lubrication with high detergency and low foam
- Good tramp oil rejection
- Formaldehyde Free

TUBOL™ PR FLUID	Product Code
200ltr Barrel	F406825



### Primary Process Drawing Lubricant Range

Product	Application	Benefits
<b>Tubol™ ML40</b>	Tubol™ ML40 is a synthetic, water based lubricant for use on the mandrel press during non-ferrous tube extrusion. Tubol™ ML40 is free from oil and graphite reducing the carbon level on the internal diameter even at this early process.	Due to its oil and graphite-free formulation, it ensures reduced carbon residue on the ID and protects the mandrels during production.
<b>Tubol™ De-coiling Fluid</b>	Tubol™ De-coiling Fluid is formulated for application to ACR non-ferrous tubes prior to annealing to prevent the sticking/welding of tightly wound, heavy coils in the furnace and allows for easier de-coiling of the tubes by the end-user.	Prevents both sticking and welding of the coils, reducing surface damage, staining and corrosion while ensuring no carbon residue post annealing.
<b>Tubol™ Extrusion Fluid</b>	Tubol™ Extrusion Fluid is primarily designed as an additive to the quench water in non-ferrous tube extrusion run-out tanks. The additive assists in the cooling and surface protection of hot extruded non-ferrous tube shell.	Tubol™ Extrusion Fluid ensures good corrosion properties, low carbon residues and protects the surface finish of drawn non-ferrous tube shell.
<b>Tubol™ Pilger Fluid K</b>	Tubol™ Pilger Fluid K is a water-soluble concentrate designed for use during processing of non-ferrous tube through a pilger mill.	Pilger Fluid K offers excellent lubrication on pilger mills, bright annealing, maintains stable solution and offers good anti-corrosion properties protecting non-ferrous tubes.
<b>Tubol™ PR Fluid</b>	Tubol™ PR Fluid has been formulated with high performance lubricity additives, ideal for use in both non-ferrous tube extrusion in pilger mills or in tube rolling mills.	PR Fluid ensures no staining on non-ferrous tubes, low foaming during production, high detergency and remains stable during manufacture.

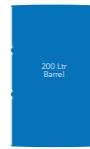
# Mineral Oil Lubricants

## TUBOL™ SN 32 (Formally Tubol™ 615)

### Low viscosity OD tube drawing lubricant

- Excellent lubrication ensuring longer tool life and superior surface finish
- Low viscosity reduces lubricant carry-over, ensuring a clean, efficient process
- Effectively displaces water from the tube surface, ensuring reliable surface protection
- Removes heavy lubricants from break-down draws thanks to its solvency and flushing action
- Easier to degrease compared to higher viscosity polymeric lubricants

TUBOL™ SN 32	Product Code
200ltr Barrel	F404725

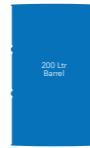


## TUBOL™ SN 80 (Formally Tubol™ 705)

### Low viscosity OD tube drawing lubricant

- Provides excellent lubrication for the outside diameter, particularly on IGT lines
- Delivers optimal lubrication for extended tool life and enhanced surface finish on the drawn materials
- Offers exceptional bright annealing characteristics during heat treatment in inert, dry atmospheres
- Low carbon residues, reducing the need for post-annealing cleaning and improving efficiency
- Removes heavy lubricants from break-down draws through solvency and flushing action
- Easily degreased compared to higher viscosity polymeric lubricants, reducing maintenance and improving cleanliness

TUBOL™ SN 80	Product Code
200ltr Barrel	F401925



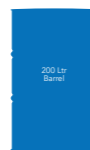
## TUBOL™ BR 2200/5500/7000

(Formally Tubol™ 193 / 2710DM / 350JR)

### Non-ferrous tube drawing lubricant

- High viscosity provides excellent load-bearing film strength
- Supports bright, oxide-free annealing finishes during heat treatment under dry, inert atmospheres
- Excellent adhesion to tube exterior, ensuring continuous lubricant coverage
- Low fuming characteristics

TUBOL™ BR 2200/5500/7000	Product Code
200ltr Barrel	F402725 / F402025 / F403025



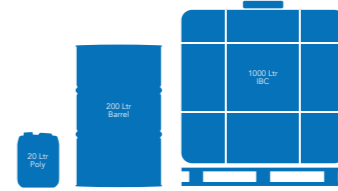
# Semi-Synthetic Lubricants

## TUBOL™ SE 260/650 (Formally Tubol™ 650)

### Semi synthetic lubricant for the drawing of non-ferrous tube, rod and section

- Good lubrication providing excellent tool life and enhanced surface finish to the drawn tube
- Excellent bright annealing characteristics in heat treatment processes with inert, dry atmospheres
- Lower carbon residues than mineral oil based lubricants
- Removes heavy lubricants from break-down draws due to solvency and flushing action
- Provides minimal lubricant carry-over

TUBOL™ SE 260 / 650	Product Code
20ltr Poly	F408508
200ltr Barrel	F408525 / F405925
1000ltr IBC	F408520



## TUBOL™ SE 2300/5000 (Formally Tubol™ 431)

### Semi synthetic lubricants for the drawing of non-ferrous tube

- Optimum OD lubrication providing excellent tool life and enhanced surface finish to the drawn tube
- Excellent bright annealing characteristics in heat treatment processes with inert, dry atmospheres
- Lower carbon residues than mineral oil based lubricants
- Low fuming characteristics
- Low chemical reactivity

TUBOL™ SE 2300 / 5000	Product Code
200ltr Barrel	F405225 / F409025



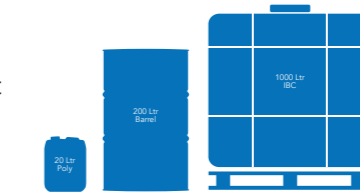
# Synthetic Lubricants

## TUBOL™ SY 125/350 (Formally Tubol™ AL 125)

### Fully synthetic low/medium viscosity lubricants for the cold drawing of non-ferrous tube

- Designed for ID finishing and IGT lubrication, also suitable for OD with low carry-over
- High-purity base fluids and hydrolysis-resistant additives reduce the risk of formicary corrosion, helping to extend tool life and deliver superior surface finish
- High viscosity index maintains viscosity at high temperatures for improved lubrication
- Residual oil film evaporates cleanly during annealing, leaving minimal residue
- Excellent bright annealing in inert, dry heat-treatment atmospheres
- Residue after bright annealing compatible with R-134a refrigerant

TUBOL™ SY 125 / 350	Product Code
20ltr Poly	F407508
200ltr Barrel	F407525 / F407625
1000ltr IBC	F407520



# Synthetic Lubricants

## TUBOL™ SY 1000/2000 (Formally Tubol™ AL 1000/2200)

Fully synthetic medium/high viscosity lubricants for the cold drawing of non-ferrous tube

- Designed for high-reduction aluminium and copper ID applications
- Excellent lubrication extends tool life and delivers a superior surface finish
- Formulated with synthetic base oils and hydrolysis-resistant additives to protect against formicary corrosion and support bright-anneal results
- High viscosity index maintains viscosity at high temperatures for better lubrication
- Residue after bright annealing compatible with R-134a refrigerant

TUBOL™ SY 1000/2000	Product Code
200ltr Barrel	F407725 / F407825



# Food Grade Lubricants

## TUBOL™ FG 125 (Formally Tubol™ 203)

Synthetic, food-grade lubricant for the drawing of non-ferrous tube

- Designed for ID finishing and IGT lubrication, also suitable for OD with low carry-over
- Provides excellent surface finish and dimensional accuracy during tube drawing
- Residual oil film evaporates cleanly during annealing, leaving minimal residue
- Excellent bright annealing in inert, dry heat-treatment atmospheres
- NSF U1 registered – certificate number 167866

TUBOL™ FG 125	Product Code
20ltr Poly	F401108
200ltr Barrel	F401125

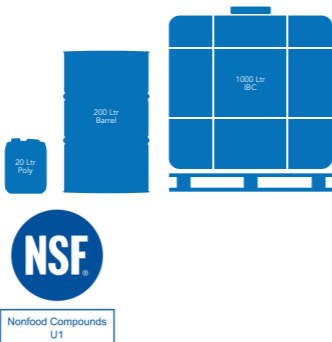


## TUBOL™ FG 2000 (Formally Tubol™ 2000AL)

Synthetic, food-grade lubricant for the drawing of non-ferrous tube

- Designed for high-reduction primary ID applications
- Excellent lubrication providing superior tool life and enhanced surface finish to the drawn tube
- Superior bright annealing performance in heat treatment processes using inert, dry atmospheres, particularly at the lower temperature ranges for aluminium
- High viscosity index maintains lubricating film even at elevated temperatures
- NSF U1 registered – certificate number 167865

TUBOL™ FG 2000	Product Code
20ltr Poly	F402608
200ltr Barrel	F402625
1000ltr IBC	F402620

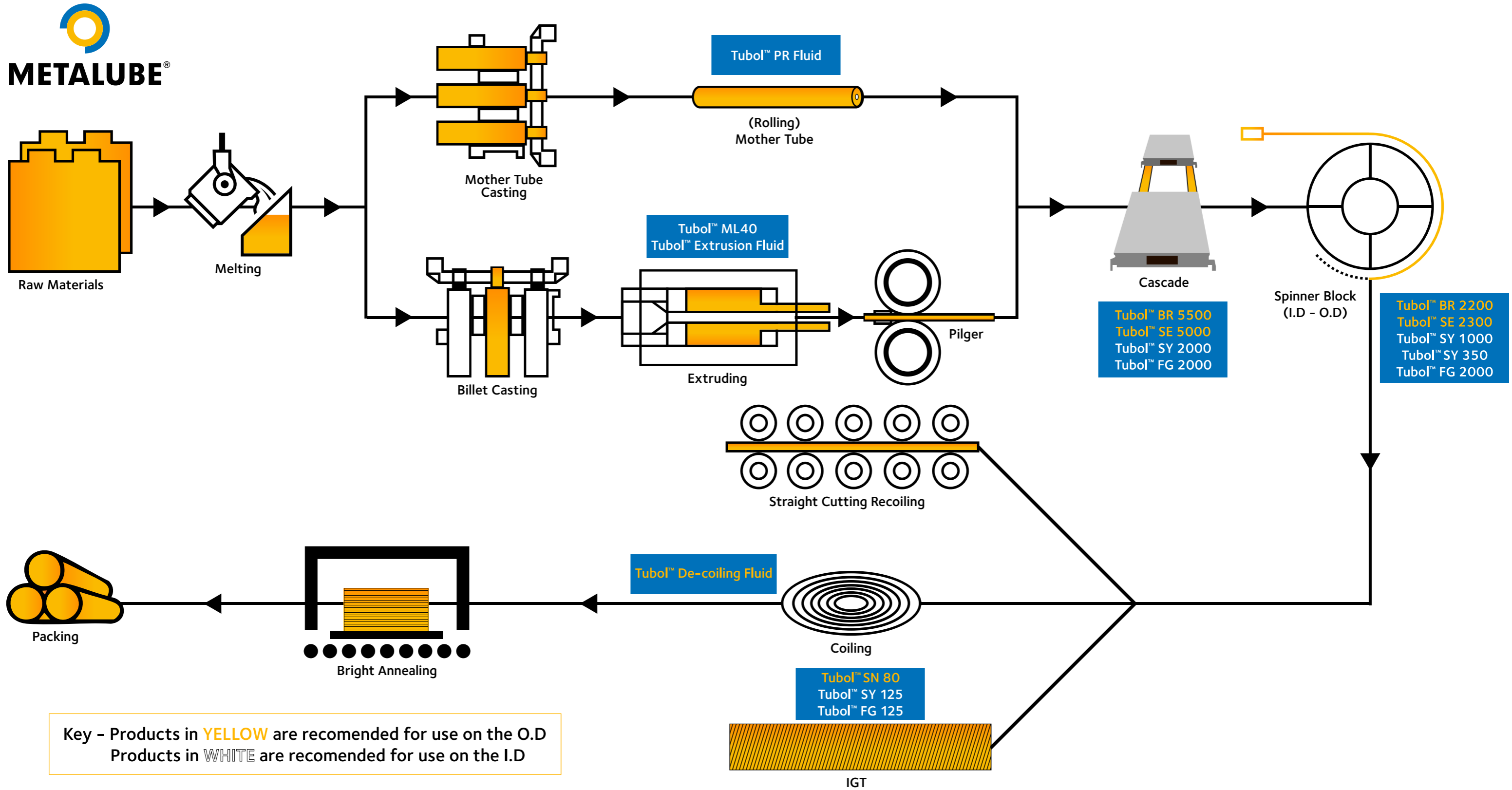


# The Tubol™ Selector Chart

Product	Viscosity @ 40°C	Cascade		Spinner Blocks		Finishing		Inner Groove	
		Ø	∩	Ø	∩	Ø	∩	Ø	∩
<b>Mineral Oil Based Drawing Lubricant Range</b>									
<b>Tubol™ SN 32</b> (Formally Tubol™ 615)	32 cSt					✓		✓	
<b>Tubol™ SN 80</b> (Formally Tubol™ 705)	80 cSt					✓		✓	
<b>Tubol™ BR 2200</b> (Formally Tubol™ 193)	2200 cSt	✓		✓					
<b>Tubol™ BR 5500</b> (Formally Tubol™ 2710DM/1962JR)	5500 cSt	✓		✓					
<b>Tubol™ BR 7000</b> (Formally Tubol™ 350 JR)	7000 cSt	✓		✓					
<b>Semi Synthetic Drawing Lubricant Range</b>									
<b>Tubol™ SE 260</b>	260 cSt				✓	✓		✓	
<b>Tubol™ SE 650</b> (Formally Tubol™ 650)	650 cSt		*	✓	*	✓			
<b>Tubol™ SE 2300</b> (Formally Tubol™ 431)	2300 cSt	✓	*	✓	*				
<b>Tubol™ SE 5000</b>	5000 cSt	✓		✓					
<b>Fully Synthetic Drawing Lubricant Range</b>									
<b>Tubol™ SY 125</b> (Formally Tubol™ AL 125)	125 cSt						✓	✓	✓
<b>Tubol™ SY 350</b>	350 cSt					✓	✓		
<b>Tubol™ SY 1000</b> (Formally Tubol™ AL 1000)	1000 cSt		✓			✓			
<b>Tubol™ SY 2000</b> (Formally Tubol™ AL 2200)	2000 cSt		✓			✓			
<b>Fully Synthetic Food Grade Drawing Lubricant Range</b>									
<b>Tubol™ FG 125</b> (Formally Tubol™ 203)	125 cSt				✓		✓	✓	✓
<b>Tubol™ FG 2000</b> (Formally Tubol™ 2000AL)	2000 cSt		✓		✓				

Key - \* indicates that the product can be used for the application, but is not recommended for optimal performance. Numbers following each Tubol product indicate viscosity grade.

# Tube Drawing Process





# METALUBE®



Certificate Number 2367  
ISO 9001, ISO 14001, OHSAS 18001

**Metalube Head Office UK**  
Tel: + 44 (0)161 775 7771  
Email: [post@metalube.co.uk](mailto:post@metalube.co.uk)  
[www.metalube.co.uk](http://www.metalube.co.uk)

**Metalube Arabia**  
Tel: +97150 6406574  
Email: [sales@metalube.ae](mailto:sales@metalube.ae)  
[www.metalube.ae](http://www.metalube.ae)

**Metalube Brazil**  
Tel: + 55 11 96188-7088  
Email: [vendas@metalube.com.br](mailto:vendas@metalube.com.br)  
[www.metalube.com.br](http://www.metalube.com.br)

**Metalube China**  
Tel: + 86-(0)21-5489 2146  
Email: [sales@metalube.cn](mailto:sales@metalube.cn)  
[www.metalube.cn](http://www.metalube.cn)

**Metalube India**  
Tel: +91 22 4971 9040/1  
Email: [sales@metalube.in](mailto:sales@metalube.in)  
[www.metalube.in](http://www.metalube.in)

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