

# Multidraw<sup>®</sup>

Lubricants for wire drawing



**Zeller+Gmelin**  
Mineralöle · Druckfarben · Chemie

# Multidraw

## High performance wire drawing agents

The excellent standard of refinement incorporated in the high-performance wire drawing agents used throughout the world under the brand name of Multidraw is the result of over 60 years of continuous research and development. Customised solutions benefit enormously from this wealth of experience.

The Zeller+Gmelin company is certified to DIN EN ISO 9001:2008 and DIN EN ISO 14001:2005 and has consequently implemented an integral concept in order to guarantee top quality. This QM system makes it possible to completely link all the quality requirements with one another and ensures that you receive products and services which you can entirely rely on.

We also offer an advisory service for the technological aspects of lubrication and wire drawing, regular laboratory monitoring for all products, plus assistance with issues regarding waste disposal.

Beside of the mentioned products in this brochure Zeller+Gmelin offers a broad range of special products.

Please don't hesitate to contact us.

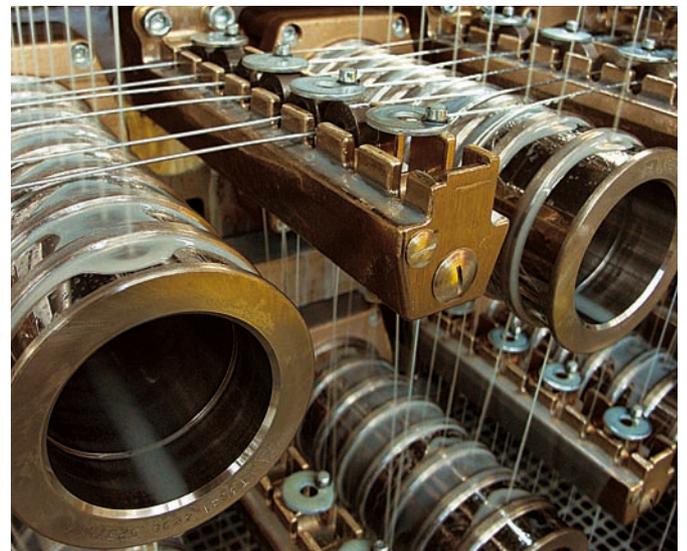
### Multidraw wire drawing agents offer

#### Advantages:

- maximum drawing rates on single-wire, multi-wire and inline systems
- rapid, efficient wire wettability
- long service life of dies
- wear protection of capstans
- high machine cleanliness
- bright wire surface, good protection against oxidation
- good sedimentation and/or filtration properties
- good skin compatibility

Wires can be drawn from the following materials with a wide variety of intake wire dimensions:

- copper and copper alloys, enamelled, tinned and zinc-coated copper wires
- aluminium and aluminium alloys
- steels and alloys
- stainless steel
- steel cord



# Copper and -alloys

Product	Prod.- No.	Description	Drawing ranges			
			Rod Break- down	Inter- mediate	Fine	Super- Fine
<b>Mineral-oil based drawing agents</b>						
Multidraw CU ROD	95720	Partially synthetic drawing emulsion, high thermal stability, suitable for single to triple wire machines	■			
Multidraw CU ROD S	25740	Like Multidraw CU ROD, but with optimised lubrication performance and emulsion stability, high machine cleanness	■			
Multidraw CU MF	95320	Partially synthetic drawing emulsion for single and multiwire machines up to 0.07 mm finished wire diameter, also suitable for tinned copper wires		■	■	
Multidraw CU MF S	24720	Like Multidraw CU MF, but with optimised lubrication performance		■	■	
Multidraw CU MF C	27680	Comparable to Multidraw CU MF with optimized capability to carry dirt, suitable for tinned and brass-plated copper wires		■	■	
Multidraw CU SF	29350	Fully synthetic drawing agent with excellent lubrication performance and machine cleanness esp. for nickel-plated wires		■	■	
Multidraw CU MFE	07000	Partially synthetic drawing emulsion, chiefly for enamelled wire machines for inline processes up to 0.07 mm finished wire diameter, also suitable for tin, silver and nickel-plated copper wires		■	■	
Multidraw CU UNI	98000	Partially synthetic universal drawing emulsion to approx. 0,07 mm finished wire diameter	■	■		
<b>Fully synthetic drawing agents</b>						
Multidraw CU SY	97220	Fully synthetic drawing agent with good corrosion protection, excellent machine cleanness		■	■	■
Multidraw CU SY Spezial	20490	Like Multidraw CU SY, but with optimised lubrication performance		■	■	■
<b>Products for annealing</b>						
Multidraw CU GWZ	21980	Partially synthetic special product for continuous annealing, good corrosion protection, good windability				
Multidraw CU AS	24060	Fully synthetic special product for continuous annealing, no influences of following processes, e.g. ultrasonic sealing				
<b>Special lubricants</b>						
Multidraw CU Grease	83600	Special product for first draw on wire drawing machines				
Multidraw CU Spool	04390	Sprayable lubricant as a spool aid				
<b>Continuous cast wire rod</b>						
Multiroll CU LF Special	26500	Fully synthetic special product for manufacturing of continuous cast wire rod				
MultiRoll Coating	23520	Aqueous corrosion protection agent for continuous cast wire rod				

## Recommended concentrations in operation:

Rod breakdown	10.0 – 17.0 %	Annealing water	0.5 – 1.5 %
Intermediate drawing	4.0 – 8.0 %	Multiroll CU LF Special	1.5 – 3.5 %
Fine drawing	2.0 – 5.0 %	Multiroll Coating	3.0 – 6.0 %
Super fine drawing	0.5 – 1.5 %		

# Aluminium and -alloys

Product	Prod.- No.	Viscosity 40 °C	Description	Drawing ranges		
				Rod Break- down	Inter- mediate	Fine
<b>Mineral-oil based drawing agents, low content of aromatics</b>						
<b>Multidraw AL Grease</b>	<b>95560</b>	c. 1650 mm <sup>2</sup> /s	Drawing grease for single and multi-drawing, suitable as first draw grease			
<b>Multidraw ALM 1650</b>	<b>90670</b>	c. 1650 mm <sup>2</sup> /s	High-viscosity drawing-oil, suitable for dipping machines	█		
<b>Multidraw ALM 650</b>	<b>83450</b>	c. 650 mm <sup>2</sup> /s	Durable drawing oils suitable for all aluminium alloys, depending on viscosity applicable for spraying or dipping lubrication. Multidraw ALM 650 is preferred for manufacturing of power transmission lines. Drawing oils can be mixed among each other	█	█	
<b>Multidraw ALM 250</b>	<b>04740</b>	c. 250 mm <sup>2</sup> /s				
<b>Multidraw ALM 120</b>	<b>94660</b>	c. 120 mm <sup>2</sup> /s				
<b>Multidraw ALF 5</b>	<b>96600</b>	c. 5 mm <sup>2</sup> /s	Fine drawing oil for wire range approx. 0,5 mm, especially used for welding wire			█
<b>Fully synthetic drawing agents, free of aromatics</b>						
<b>Multidraw ALG 200</b>	<b>26020</b>	c. 2000 mm <sup>2</sup> /s	Drawing oil for hard alloys for large demands on drawing performance, suitable for wire first draw in dipping machines, ALG 200 for wire diameter >10 mm	█		
<b>Multidraw ALG 80</b>	<b>21270</b>	c. 800 mm <sup>2</sup> /s				
<b>Multidraw ALG 40</b>	<b>94800</b>	c. 370 mm <sup>2</sup> /s	Drawing oils with very good viscosity/temperature characteristic, high aging stability, in thermal treatment no residues, ALG 17 is esp. suitable for spraying	█	█	
<b>Multidraw ALG 17</b>	<b>20190</b>	c. 175 mm <sup>2</sup> /s				
<b>Multidraw ALG 8</b>	<b>20370</b>	c. 80 mm <sup>2</sup> /s	Drawing oil which is highly suitable for spray application, in thermal treatment no residues		█	█
<b>Multidraw ALG 4</b>	<b>93915</b>	c. 40 mm <sup>2</sup> /s				
<b>Multidraw ALG 3</b>	<b>22720</b>	c. 30 mm <sup>2</sup> /s				
For ALF 5 and ALG 80 to ALG 4 there are safety declarations available as per the German Food and Commodities Act.						



# Stainless steel, steel and steel cord

Product	Prod.- No.	Viscosity 40 °C	Description
<b>Drawing agents for stainless steel wires</b>			
<b>Multidraw ST 5</b>	<b>23990</b>	c. 5 mm <sup>2</sup> /s	Special drawing oils with EP additives for stainless steel wires in the extra-fine drawing range, ST 5 from approx. < 0,8 mm to approx. 0,02 mm, ST 10 from 0,9/0,8 mm to approx. 0,08 mm
<b>Multidraw ST 10</b>	<b>21840</b>	c. 10 mm <sup>2</sup> /s	
<b>Multidraw ST 30</b>	<b>21970</b>	c. 30 mm <sup>2</sup> /s	Special drawing oils with EP additives for stainless steel wires in the fine drawing range, ST 30 from approx. 1,2 mm to approx. 0,1 mm, ST 60 from approx. 2,0 mm to approx. 0,3 mm, ST 120 > 2,0 mm
<b>Multidraw ST 60</b>	<b>23850</b>	c. 60 mm <sup>2</sup> /s	
<b>Multidraw ST 120</b>	<b>26790</b>	c. 120 mm <sup>2</sup> /s	
<b>Multidraw ST 10 Extra</b>	<b>26970</b>	c. 10 mm <sup>2</sup> /s	Like Multidraw ST 10, but with improved lubrication
<b>Multidraw ST 30 Extra</b>	<b>25350</b>	c. 33 mm <sup>2</sup> /s	Like Multidraw ST 30, but with optimised lubrication performance for FeAlCr- and titan wires
<b>Multidraw ST Grease Spezial</b>	<b>90080</b>	flowable	Pigmented drawing grease for large- size steel and stainless steel wires
<b>Multidraw S 1</b>	<b>21010</b>	no residues after evaporation slight lubrication after evaporation	Stranding and bunching lubricant mainly for stainless steels, but also suitable for all kind of metals
<b>Multidraw S 4</b>	<b>26690</b>		
<b>Drawing agents for other alloys</b>			
<b>Multidraw MS 5</b>	<b>83680</b>	c. 5 mm <sup>2</sup> /s	Special drawing oil for brass alloys at high drawing rates
<b>Drawing agents for steel wires</b>			
<b>Multidraw ST Grease</b>	<b>83420</b>		Water miscible drawing grease for iron and steel wires, electro-plated wires, copper-plated welding rods etc.
<b>Multidraw ST Grease Extra</b>	<b>24090</b>		Non water miscible grease for first draw of iron and steel wires
<b>Multidraw ST ZN</b>	<b>22500</b>		Emulsion concentrate for iron and zinc-plated steel wires
<b>Multidraw ST ZN Spezial</b>	<b>22780</b>		Like Multidraw ST ZN, but with improved lubrication, for high-tensile steels, guarantees optimised machine-cleanness
<b>High-performance drawing agents for steel cord and hose wires</b>			
<b>Multidraw VSV 77 R</b>	<b>06510</b>		Water miscible, synthetic drawing agents EP-alloyed for steelcord wires, excellent rubber adhesion. Multidraw STC 05 also suitable for hose wires
<b>Multidraw STC 05</b>	<b>25200</b>		
<b>Multidraw Strandoil</b>	<b>20670</b>		Non water miscible drawing oil for bunching the wire on the stranding machine, e.g. for steel cord wires and for regreasing after fine drawing

## PROGRAM

### Industrial lubricants

Multiboard®	separation agents for derived timber products
Multical®	calibration lubricants
Multicast®	separation agents for metal
Multicor®	corrosion protection lubricants
Multicut®	non-water-miscible cooling lubricants
Multidraw®	wire drawing lubricants
Multidraw®	deep-drawing lubricants
Multipress®	extrusion oils
Multiroll®	lubricants for manufacturing continuous cast wire rod
Textol®	lubricants for the textile industry
Zubora®	water-miscible cooling lubricants
Divinol®	lubricating greases
Divinol®	guideway and slideway oils, hardening oils, adhesive oils, hydraulic oils, industrial gear oils, machine oils, commercial white oils, compressor oils, cylinder oils

You can find our products in over 100 countries world-wide .



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