

# Fully synthetic products replace drawing emulsions in copper wire drawing – BECHEM Unopol S series

For a long time already the fully synthetic drawing lubricants of the **BECHEM Unopol S** series have been successfully used for demanding wire drawing operations in fine and superfine drawing processes. Excellent drawing results and high lifetime have been achieved at wire producers all over the world. The intensive research and development work of BECHEM guarantees the best quality and productivity in the modern business of wire drawing.

Through the consistent and continuous development of fully synthetic drawing lubricants BECHEM faces the challenge to substitute synthetics where drawing emulsions are used.

The new **BECHEM Unopol S** series fully synthetic drawing lubricants are now available and exceed, by far, the performance of drawing emulsions and minimize emulsion related maintenance.

The use of **BECHEM Unopol S 643** offers various advantages, especially compared to drawing emulsions:

- Very good lubricating properties, very low die wear
- Only low formation of copper salt (no blue drawing solutions)
- No sticky residues at high service concentrations
- Clean drawing machines based on optimal wetting
- Long lifetime of the drawing solutions
- No absorption of tramp oil
- Excellent filterability
- Hardness and electrolyte stability
- Very good bio stability
- Stable pH-value
- Low foam formation
- Low addition rate

## BECHEM Unopol S 643

BECHEM Unopol S 643 is a water soluble, mineral oil free drawing lubricant to draw bare, tin, nickel and silver plated copper wires down to a final diameter of 0.05 mm on single and multi wire drawing machines. Additional benefits are excellent drawing results with final diameters of > 0.10 mm in medium, fine and superfine wire drawing.

## BECHEM Unopol S 803

BECHEM Unopol S 803 is a water soluble, yellowish and mineral oil free lubricant to draw bare and tin-plated copper wires on single and multi wire machines down to a final diameter of 0.10 mm. Based on well selected synthetic lubrication components, anti-corrosion additives and wetting agents BECHEM Unopol S 803 solutions will not stick, show a low tendency to foam formation, are resistant to hardness and electrolytes and offer excellent cooling and lubricating performance.

## BECHEM Unopol S KF

BECHEM Unopol S KF is a water soluble, yellow-brown and mineral oil free lubricant to draw wires of copper and copper alloys as well as precious metals on single and multi wire machines down to a final diameter of 0.05 mm, sometimes even down to 0.03 mm. Based on well selected synthetic lubrication components, anti-corrosion additives and wetting agents BECHEM Unopol solutions will not stick, show a low tendency to foam formation, are resistant to hardness and electrolytes and offer excellent cooling and lubricating performance.

## BECHEM Unopol S 621

BECHEM Unopol S 621 is a water soluble, mineral oil free, fully synthetic lubricant for medium and fine wire drawing. Bare, tin, nickel and silver plated copper wires are drawn on single and multi wire machines with BECHEM Unopol S 621 solutions down to final diameters of 0.10 mm, sometimes even down to 0.07 mm. BECHEM Unopol S 621 is also suitable for the use in enamelled wire production. Based on the content of synthetic lubrication components as well as selected anti-corrosion additives and surfactants BECHEM Unopol S 621 solutions excel in best performance.

## BECHEM Unopol S 630

BECHEM Unopol S 630 is a water soluble, yellowish and mineral oil free fully synthetic lubricant for medium and fine wire drawing. Bare, tin, nickel and silver plated copper wires are drawn on single and multi wire machines with BECHEM Unopol S 630 solutions down to final diameters of 0.10 mm, sometimes even down to 0.07 mm. BECHEM Unopol S 630 is also suitable for the use in enamelled wire production. Based on well selected synthetic lubrication components, anti-corrosion additives and wetting agents BECHEM Unopol S 630 solutions will not stick, show only little tendency to foam formation, are resistant to hardness and electrolytes and offer excellent cooling and lubricating performance.

