



## WIRE DRAWING LUBRICANTS

Wire drawing is a manufacturing process used to reduce or change the diameter of a wire or rod by pulling the wire or rod through a single or series of drawing die(s). Wire drawing is the process used to manufacture the wire for all types of applications.

There are many applications for wire drawing, including electrical wiring, cables, tension-loaded structural components, springs, paper clips, spokes for wheels, and stringed musical instruments. There are a variety of metals that are made into wire, the most common being steel, copper, brass, aluminum, stainless steel, and tungsten.

### Wire Drawing Process

During the wire drawing process, no material is shaved off, the wire simply gets longer. The material is cold-worked and hardens (and also increases in tensile strength) through each step. Processes used in wire drawing include wet and dry drawing. Methods used are single draft drawing and continuous drawing. Both process and method used depend on requirements of the finished product.

The main process steps are: Wire head is pointed by wire pointing machine, Wire coils are placed on a ring, The pointed end is passed through a die to the drawing machine, Reduction is achieved in four stages, Drawn wire is coiled on bull block. There are several types of drawing machines. These have been grouped as follows :- Drawing frames, Bull blocks, & motor block, Multiple-drawing machines, Fine-wire machines, Turk's - head shaped - wire drawing machines, Drawbenches.

The following lubricants are recommended for Wire Drawing applications.

PRODUCT	Specific Gravity (gms/cc)	Lubricant	Particle Size mincrons	Viscosity (cps at 25°C)	Diluent	Application	Packing (kgs)
LUBRICOTE-Z 36	1.20 - 1.25	Graphite	3-5	Paste	Water	Filament wire drawing of Tungsten and Molybdenum Wires (for coarse wire)	25
LUBRICOTE-Z 37	1.20 - 1.25	Graphite	0-1	Paste	Water	Filament wire drawing of Tungsten and Molybdenum Wires (for fine wire)	5 & 25
LUBRICOTE-X 30	1.05 - 1.10	Graphite	30-35	Paste	Mineral Oil	For Aluminium log drawing (flash point 250°C)	25