



Tower Oil & Technology Co.

KLENEDRAW W-4701

KLENEDRAW W-4701 is a heavy duty chemical solution formulated to lubricate metal forming operations on ferrous metals, high strength alloys, stainless steels, and galvanized steel. **KLENEDRAW W-4701** is designed for difficult blanking, piercing, forming, drawing, and deep drawing operations. It has excellent wetting characteristics and interacts with metal surfaces to produce a high strength boundary film and chemical extreme pressure lubrication.

USAGE

KLENEDRAW W-4701 can be used as a straight concentrate or at dilutions up to 15 to 1 with tap water. It can be applied using spray systems, drip, roller coater or flood methods.

KLENEDRAW W-4701 is easily removed from parts in aqueous wash systems.

BENEFITS

- **Is a Very Operator-Friendly Product**
- **Contains No Hazardous Ingredients**
- **Affords Good In-Process Rust Protection**
- **Cleans Easily In Low Temperature Water Based Solutions**
- **Mixes Easily With Water**
- **Can Be Welded Through Without Cleaning**
- **Provides Excellent Die Life**
- **Produces an Extreme Pressure Lubricating Film**

TECHNICAL SUPPORT

TOWER wants to assist you in evaluation and selection of suitable products. We urge you to take advantage of this service. This information sheet and **TOWER's** assistance, however, are not a substitute for your own testing and evaluation.
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- COMPANY:** Large Automotive Metal Stamper, Midwest, USA
- OBJECTIVE:**
- Eliminate Cleaning Operation Prior to Weld
 - Produce Part with Synthetic Metal Forming Lubricant
- COMPONENT:** Chassis Part for Mid-Sized American SUV
- OPERATION:** Progressive Stamping Die – 10 Stations
- MATERIAL:** 3/16” High Strength – Low Alloy (HSLA) – 70 Rb
- APPLICATION METHOD:** Airless Spray on Entry – Reapply in Tooling
- POST PROCESSING:** Welded to Assembly – E-Coated
- PREVIOUS LUBRICANT:**
- Highly Chlorinated Water Soluble Oil
 - Working Ratio 4:1
 - Parts Cleaned Prior to Welding/Assembly
 - Unsuccessful 2-year search for Synthetic Lubricant
- RESULTS:**
- Working Ratio 5:1 Ratio – Obtained Normal Production Runs
 - Eliminated Cleaning Prior to Welding and Assembly
 - Excellent Weld Through Characteristics
 - Eliminated Rust Problems