



KLENEDRAW 3421

KLENEDRAW 3421 is an oil free synthetic solution designed to lubricate metalforming operations on ferrous metals, high strength alloys, stainless steel, aluminum alloys, zinc coated metals, and painted metal. It can be used for a variety of metalforming operations including punching, perforating, multi-stage forming, drawing, and deep drawing operations. It penetrates and interacts with metal surfaces producing a high strength film with chemical extreme pressure characteristics. **KLENEDRAW 3421** is fully inhibited to prevent staining of metal surfaces and does not form sticky, tacky, or wax like residues after drying. It provides exceptional protection against staining zinc coated metals such as hot dip galvanized, galvalume, and galvaneal. The use of **KLENEDRAW 3421** helps to maintain clean tooling and produce clean parts. It passes automotive cleanability and phosphateability testing at ACT Laboratories. **KLENEDRAW 3421** is widely used on automotive stampings that get welded and e-coated.

USAGE

KLENEDRAW 3421 can be used at dilutions up to 20:1 with tap water, depending on the severity of the operation. At dilutions of 8:1 or more it will leave a dry to the touch residue after the water has evaporated. **KLENEDRAW 3421** can be applied in minimal amounts by using JET SET® airless spray, drip, roller coater or similar methods.

PHYSICAL CHARACTERISTICS

Appearance	Yellow Liquid
Odor	Mild
pH	9.0 Typical
Refractive Index (RI)	8.5 @ 3:1 4.9 @ 6:1 3.4 @ 9:1 2.6 @ 12:1 1.7 @ 19:1
RI Factor	2.94 x RI = Vol %

BENEFITS

- **Contains No Hazardous Ingredients**
- **Can Replace Vanishing Oil in Many Instances**
- **Can Improve Part Quality and Tool Life**
- **Does Not Contain Chlorine or Sulfur**
- **Contains No VOC's**
- **Excellent Corrosion Protection For Zinc Coatings**
- **Has Excellent Rust Protection for Inside Storage**
- **Cleans Easily In Low Temperature Water Base Solutions**
- **Can Be Welded Through Without Cleaning**
- **Mixes Easily With Water**
- **Is Environmentally Friendly**

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.