

# TECHNICAL DATA SHEET

## PRODRAW BB

### HEAVY DUTY DRAWING AND PUNCHING LUBRICANT

PRODRAW BB is a heavily fortified chlorine free drawing fluid for difficult to heavy duty drawing and deep hole drilling. It has superior E.P. characteristics using a combination of fats, sulfur, and proprietary additives to achieve excellent high load carry capabilities on the manufactured parts to produce burr-free edges and long tool life.

#### Applications

PRODRAW BB is recommended for heavy duty drawing, punching, and button rifling operations for steel and stainless steel.

PRODRAW BB can be applied by brush, roller, swab, or dip methods.

PRODRAW BB can be cleaned with conventional alkaline cleaning systems.

#### Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

#### Benefits

- Reduce galling
- Improved die life
- Chlorine and heavy metal free

#### Properties

PROPERTY	TYPICAL VALUE	UNIT
Brookfield Viscosity at 25°C	25,000	cps
Sulfur	Present	
Fatty Oils	Present	
Weight	9.5	lbs/gal

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# TECHNICAL DATA SHEET

## DRAWSOL® 3694

### HIGH VISCOSITY DRAWING LUBE

DRAWSOL® 3694 is a compounded blend of chlorinated extreme pressure agents and fatty lubricants giving a high viscosity product.

#### Applications

DRAWSOL® 3694 is used primarily for heavy draw work, heavy piercing, and heavy extruding and is especially effective for stainless steels.

The tenacity of DRAWSOL® 3694 permits use on multi-stage or severe work where the lubricant will cling to the workpiece and tooling.

DRAWSOL® 3694 can be applied with a roller coater or brush.

#### Benefits

- Excellent extreme pressure lubricity
- Cost effective
- Improves tool life
- Excellent cling to workpiece and tool
- Can be used as received or cut back with light mineral oil or solvent
- CAUTION: Product does not mix with water. Use only appropriate blending oils and solvent for dilution.

#### Health, Safety and Handling

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#### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Amber fluid	
Specific Gravity at 15°C (60°F)	1.31	
Typical Viscosity at 40°C (cSt)	6500-10000	cps

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# TECHNICAL DATA SHEET

## PRODRAW 150

### HEAVY DUTY DRAWING AND PUNCHING LUBRICANT

PRODRAW 150 is a very heavy duty, chlorinated drawing and punch lubricant.

#### Applications

It can be used on those jobs requiring a maximum amount of extreme pressure lubrication. PRODRAW 150 will minimize heat build-up in parts and tools and eliminate galling.

#### Recommendation for Use

Its unique additive package ensures excellent performance on a wide variety of deep drawing and punching operations. PRODRAW 150 contains active sulfur and should not be used on copper-based alloys. It contains an effective rust inhibitor package to protect against the staining often associated with chlorinated drawing oils. PRODRAW 150 can be applied by roll, brush, or dip. PRODRAW 150 can be removed using most alkali or caustic cleaners. The PRODRAW 150 is excellent for button broaching.

#### Benefits

- Excellent performance on a wide variety of deep drawing and punching operations
- Protects against the staining
- Excellent for button broaching

#### Health, Safety and Handling

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#### Properties

PROPERTY	TYPICAL VALUE	UNIT
Viscosity at 100°F	2000	SUS
Flash Point	430	°F
Weight	8.66	lbs/gal
Chlorine	Present	
Sulfur	Present	
Lubricity Esters	Present	
Color (ASTM)	3.0	

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# TECHNICAL DATA SHEET

## DRAWSOL® 850 X2 HEAVY DUTY DRAWING & STAMPING LUBE

DRAWSOL® 850 X2 is a compounded blend of extreme pressure agents, fatty lubricants, petroleum oil and other inhibitors.

### Applications

DRAWSOL® 850 X2 contains active sulfur and is primarily designed for heavy duty drawing, stamping, forming and extruding. This product has been formulated to provide improved washability.

### Recommendation for Use

DRAWSOL® 850 X2 may be used as received for difficult deep draws on heavy gauge steel or tough alloys.

DRAWSOL® 850 X2 may also be cut back with water for use on routine press operations ranging from heavy gauge drawing to medium stamping. The severity of the operation will dictate the appropriate dilution to use.

### Benefits

- Enhanced additive package containing high levels of ester and EP provide maximum lubrication performance for increased tool and die life
- Versatile product, can be used neat or cut back with water
- Ideal product for difficult steel and stainless steel operations
- Formulated to provide good washability in subsequent cleaning operations, easier cleaning and operator acceptance

### Health, Safety and Handling

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### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Clear, dark brown	
Specific Gravity at 15°C (60°F)	1.03	
Typical Viscosity at 40°C	120-140	cSt

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# TECHNICAL DATA SHEET

## HOUGHTO-DRAW® 3105 HIGHLY CHLORINATED METAL FORMING LUBRICANT

HOUGHTO-DRAW® 3105 is a versatile lubricant for carbon and stainless steel forming. This product is a high viscosity oil with extreme pressure additives. HOUGHTO-DRAW® 3105 contains highly chlorinated wax and additives to enhance wetting characteristics on metal surfaces.

### Applications

HOUGHTO-DRAW® 3105 is a unique drawing compound which enables the most difficult forming operations, such as, heavy gauge stainless steel tube reduction and bending to the precision forming of surgical medical instruments.

### Recommendation for Use

HOUGHTO-DRAW® 3105 is intended to be used as received. It can also be diluted with mineral oil. HOUGHTO-DRAW® 3105 can be removed with alkaline cleaning systems.

### Benefits

- High viscosity and high chlorine, with excellent lubricity
- Excellent for deep drawing of stainless and challenging steel substrates

### Health, Safety and Handling

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### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Amber, brown liquid	
Specific Gravity at 15°C (60°F)	1.2	
Viscosity at 100°F (38°C)	7000	SUS
Odor	Bland	
Flash Point	400   204	°F   °C
Fire Point	450   232	°F   °C
Density	10.0	lbs/gal

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