# METALFORMING PRODUCT LINE





YOUR SINGLE SOURCE SUPPLIER OF METALWORKING FLUIDS

### ABOUT METALLOID

Since 1951 Metalloid Corporation has formulated high-quality metalworking fluids and compounds. We formulate, manufacture, market and service a full range of metalworking fluids including, but not limited to, coolants for machining and grinding, drawing and stamping compounds, corrosion inhibitors and cleaners. Metalloid has supplied trouble free products since 1951. Our goal is to provide our customers increased productivity through proper fluid selection and application which reduces waste and down time on equipment. Metalloid offers products formulated with consideration for safety, health and the environment.

### METALFORMING LUBRICANTS

### **FERROUS METALS**

### ADDVANCE 6110

Heavy-duty, oil free, biodegradable metalforming lubricant composed of renewable resources.

### ADDVANCE 6120

Heavy-duty, biodegradable, progressive die stamping and drawing fluid for steel and stainless steel.

### ADDVANCE 6170

Environmentally friendly tube-bending lubricant designed to bend fabricated tubing for the HVAC, automotive, aerospace and appliance industries.

### ADDVANCE 6615

Ultra heavy-duty, biodegradable deep draw metalforming lubricant for the most severe of operations for steel and stainless steel.

### 🔰 ADDVANCE 6380

Heavy-duty, biodegradable stamping, deep drawing, tube bending, and endforming lubricant for stainless steel and other tough alloys.

### **Non-Ferrous**

### ADDVANCE 5430

Heavy-duty botanical lubricant for copper wire drawing, deep drawing aluminum and aluminum extrusion.

### ADDVANCE 2100-AL3

Synthetic metalforming lubricant for medium-duty work with aluminum.

### ADDVANCE 6580

Synthetic aluminum stamping fluid with Nissan approval.

### ADDVANCE 6323

VOC free, water-based vanishing lubricant for light to medium-duty forming operations.

### ADDVANCE 5560

Heavy-duty aluminum water dilutable drawing and stamping fluid.















### **Ferrous/Non-Ferrous**

### ADDVANCE 6370

Heavy-duty, biodegradable metalforming lubricant for the most severe operations. Can be used on aluminized steel and stainless steel.

### 🔰 ADDVANCE MF-127

Heavy-duty metalforming lubricant for difficult forming operations, especially with aluminum.

### 🖡 METCHEM 6620

Heavy-duty, non-ferrous stamping and drawing fluid with Nissan approval.

### METDRAW 6640

Heavy-duty, biorenewable tube bending paste for all metals.

### **OTHER PRODUCTS**

### 🕺 RUST PREVENTATIVES- Water Based

METCOR 52- Oil free, biodegradable, indoor rust preventative for all metals. METCOR 57- Solvent based rust preventative for long-term indoor protection of ferrous and non-ferrous metals.

METCOR 71- A indoor / outdoor botanical rust preventative with very light residue.

### CLEANERS

METKLEEN 2080- Low alkaline, all purpose cleaner for all metals. METKLEEN 2090- Low alkaline, spray cleaner for soft metals. METKLEEN 2120- Low alkaline, hot-tank cleaner for all metals. METKLEEN 2140- Heavy-duty floor and all purpose maintenance cleaner. METKLEEN 2150- High alkaline, aqueous cleaner for ferrous metals.

### ADDVANCE BOTANICAL HAND CLEANER

Heavy-duty, waterless or water dilutable detergent for hand washing in the machine shop or any industrial facility.

**REFRACTOMETERS** - Hand held, light weight, digital reading, extremely accurate. Easy to use and calibrate.

### MAINTENANCE FLUIDS

Our maintenance fluids are formulated to maximize equipment efficiency and operations by using group II base oils; assisting in longer life of servos, tighter tolerances in ways and beds and cleaner overall performance.

WAYLUBE 220	HYDRAULIC OIL 32 A
WAYLUBE 68	HYDRAULIC OIL 46A
WAYLUBE 32	MET HYDRAULIC 68
SPINDLE OIL #2	GEAR OIL 90
SPINDLE OIL #6	GEAR OIL 220
SPINDLE OIL #10	











No one understands metalworking fluids better than Metalloid, so no one else can bring you advanced technology that works on the issues that matter to you. Get the whole story by calling Metalloid at **800.686.3201.**  World Headquarters 1160 White Street Sturgis, MI 49091 telephone 269.503.7300 facsimile 269.503.7795

**Texas Facility** 1720 N. Quevado St. Jacksonville, TX 75766 telephone 903.589.3933 facsimile 903.589.3924

### WWW.METALLOIDCORP.COM

### ADDVANCE 6110 **Heavy-Duty Synthetic Metalforming Lubricant**

### Product Description

ADDVANCE 6110 is an oil free, biodegradable metalforming lubricant composed of renewable resources. The unique 'botanical green" chemistry affords the ultimate in lubricity, personal safety and environmental compatibility. This state-of-the art formulation provides manufacturing and operator benefits that are unattainable with traditional oil based lubricants. ADDVANCE 6110 is the optimum choice for heavy-duty metal stamping, blanking and deep drawing operations on all metals.

### Benefits

- Outstanding Corrosion Protection
- Eliminates smoke and oil residues
- Weldable, heat treatable, ashless
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible

- Cleaner/safer press room environment
- Non-Staining safe on yellow metals
- Contains no hazardous materials
- Biodegradable, operator friendly
- Reduces post finishing costs
- Cost-effective low end use costs

Extruding End-forming

Notching

Spinning

Punching/ piercing

### Applications

- Progressive and compound die stamping
- Blanking
- Deep drawing
- Blending
- Contour and Rollforming

### Directions for Use

ADDVANCE 6110 can be used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ration will depend on the type of metal formed, thickness of the metal, operation and application method.

### Packaging

ADDVANCE 6110 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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PROPERTIES



Addvance



### **ADDVANCE 6120** Ultra Heavy-Duty Synthetic **Metalforming Lubricant**

### Product Description

ADDVANCE 6120 is an ultra heavy-duty biodegradable metalforming lubricant for the most severest of operations. ADDVANCE 6120 was specifically engineered to replace oil based lubricants in the toughest draws on the hardest metals. ADDVANCE 6120 is a unique, no oil, renewable resource formulation that will provide the operator with benefits that are unattainable with traditional oil based lubricants. This state-ofthe art chemistry affords the ultimate in lubricity, personal safety and environmental compatibility. ADDVANCE 6120 provides the benefits of a chlorinated lubricant without the use of chlorinated paraffin. ADDVANCE 6120 is the ideal choice for heavy-duty stamping, blanking and deep drawing operations on all metals including the hardest alloys.

### Benefits

- Outstanding Corrosion Protection
- Eliminates smoke and oil residues
- Anti-wear EP package reduces part
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible

### Applications

- Progressive and compound die stamping
- Heavy gauge stamping
- Single hit deep drawing
- Stainless steel deep drawing
- Heavy gauge blanking

### Directions for Use

ADDVANCE 6120 can be used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ration with depend on the type of metal formed, thickness of the metal, operation and application method.

### Contains no hazardous materials Biodegradable, operator friendly

Cleaner/safer press room environment

Non-Staining safe on yellow metals

Reduces post finishing costs

Extruding

Notching

Spinning

End-forming

Punching/ piercing

Cost-effective - low end use costs

#### PROPERTIES Amber, viscous Appearance liauid Odor Bland Specific Gravity 1.05-1.10 Water Solubility Complete pH (20%) 8.5-9.0

Addvance

### Packaging

ADDVANCE 6120 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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USDA CERTIFIED

BIOBASED

### **ADDVANCE 6170** Synthetic Tube Bending and Forming Lubricant

### Product Description

ADDVANCE 6170 is an environmentally friendly metalforming lubricant designed to bend fabricated tubing for the HVAC, automotive, aerospace and appliance industries. ADDVANCE 6170 is an oil free synthetic paste lubricant which tenaciously adheres to both the mandrel and the tube thereby reducing lubricant consumption and messy work areas. ADDVANCE 6170 is weldable, cleans off easily with only water and protects metal surfaces. ADDVANCE 6170 is the ideal choice for tube bending and heavy gauge deep drawing and forming operations.

### Benefits

- Outstanding corrosion protection
- $\sqrt{}$  Cleans off easily using only water
- ✓ High operator acceptance
- $\sqrt{}$  Eliminates smoke and oil residues
- round or square tubing.
- $\sqrt{}$  Versatile multiple applications
- $\sqrt{}$  Contains no petroleum oils
- Applications
  - $\sqrt{}$  Bending stainless and aluminum tubing
  - Tube swaging
  - ✓ Deep drawing steel blanks
  - Tube drawing/expanding
  - V Bending exhaust manifolds, heat exchangers, fuel lines, etc.

**Directions for Use:** ADDVANCE 6170 is usually applied as received to the tube or mandrel before bending. The paste lubricant form enhances application by brushing, swabbing or dipping methods. ADDVANCE 6170 can be diluted with water for hand spraying. NOTE: ADDVANCE 6170 can also be thinned by adding small amounts of water directly to the lubricant to achieve desired consistency.

### **Properties**

Appearance	White, smooth paste	Water Solubility	Complete
Odor	Bland	Specific Gravity	0.90 - 1.10

Packaging ADDVANCE 6170 is available in 5 gallon pails and 55 gallon drums.

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## meta BOTANICAL TECHNOLOGIES



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### The Metalloid Partnership Advantage

#### Superior die life

- Seals metal surfaces to repel moisture
- $\sqrt{}$  Excellent finishes on soft metals
- ✓ Reduces post finishing costs
- $\sqrt{}$  Paste lubricant ideally suited to form  $\sqrt{}$  Tenacious film no reapplication "stays where you put it"
  - ✓ Cost-effective low end use cost
  - Wire die box drawing
  - Punching/Piercing/Notching
  - Endforming
  - ✓ Compound die stamping
- Addvance
- Biodegradable

### ADDVANCE 6615 Heavy-Duty Synthetic **Metalforming Lubricant**



### Product Description

ADDVANCE 6615 is a heavy-duty biodegradable metalforming lubricant particularly wellsuited for severe operations. ADDVANCE 6615 was specifically engineered to replace oil based lubricants in the toughest jobs on the hardest metals. ADDVANCE 6615 is a unique, no oil, renewable resource formulation that will provide the operator with benefits that are unattainable with traditional oil based lubricants. This state-of-the art chemistry affords the ultimate in lubricity, personal safety and environmental compatibility. ADDVANCE 6615 provides the benefits of a chlorinated lubricant without the use of chlorinated paraffin or sulfurs. ADDVANCE 6615 is the ideal choice for heavy-duty forming, stamping, blanking, and deep drawing operations on all metals including the hardest alloys. Benefits

- Outstanding Corrosion Protection
- Cost-effective low end use costs
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible

### Applications

- Deep drawing of stainless steels
- HSLA Automotive Stamping
- Drawing nickel and exotic alloys
- Heavy gauge blanking

### Directions for Use

ADDVANCE 6615 is used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ratio will depend on the type of metal formed, thickness of the metal, operation and application method.

### Packaging

ADDVANCE 6615 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

- Cleaner/safer press room environment
- Excellent "wet-out" properties
- Contains no hazardous materials
- Biodegradable, operator friendly
- Reduces post finishing costs
  - Extruding
  - End-forming
  - Punching/Piercing
  - Notching

PROPERTIES		
Appearance	Dark amber, viscous liquid	
Odor	Bland	
Specific Gravity @ 70° F	0.9940	
Water Solubility	Dispersible	
pH (20%)	9.1	
Viscosity	11,125 cps	

Addvance

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### **ADDVANCE 6380** Heavy-Duty Wire - Rod - Tube **Drawing Lubricant**



ADDVANCE 6380 is a heavy-duty biodegradable wire, rod and tube drawing lubricant for the most severest of operations. ADDVANCE 6380 was specifically engineered to replace oil based lubricants in the toughest draws on the hardest metals. ADDVANCE 6380 is a unique, no oil, renewable resource formulation that will provide the operator with benefits that are unattainable with traditional oil based lubricants. This state-of-the art chemistry affords the ultimate in lubricity, personal safety and environmental compatibility. ADDVANCE 6380 provides the benefits of a chlorinated lubricant without the use of chlorinated paraffin. ADDVANCE 6380 is the ideal choice for heavy-duty stamping, blanking and deep drawing operations on all metals including the hardest alloys.

#### Benefits

- Outstanding corrosion protection
- EP package reduces wire tears
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible
- Produces bright/clean wire

### Applications

- Bright drawing stainless steel wire
- Bright drawing stainless tubes
- Drawing nickel and exotic alloys
- Stainless steel deep drawing
- Heavy gauge blanking
- Directions for Use

ADDVANCE 6380 is used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ratio will depend on the type of metal formed, thickness of the metal, operation and application method.

### Packaging

ADDVANCE 6380 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

expressed or implied, and we assume no responsibility for loss, damage, or expense, direct or consequential, arising out of their use.

metal

- Cleaner/safer plant environment
- Excellent "wet-out" properties
- Contains no hazardous materials
- Biodegradable, operator friendly
- Reduces post finishing costs
- Cost-effective low end use costs
- Extruding
- End-forming
- Punching/Piercing
- Notching
- Die Box Lubricant (recirculated)

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BOTANICAL TECHNOLOGIES www.metalloidcorp.com/botanical

@ 70° F Complete Water Solubility **Renewable Resources** pH (20%) Biodegradable .>2000 S.U.S. @100°F Viscosity

Appearance

Odor

Specific Gravity

Addvance

PROPERTIES

Dark, Amber, viscous

Liquid

Bland

1.10 - 1.19

Yes

85 - 90

100%

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 69%

### **ADDVANCE 5430** Heavy-Duty Synthetic **Metalforming Lubricant**



### Product Description

ADDVANCE 5430 is a heavy-duty biodegradable metalforming lubricant for severe operations. ADDVANCE 5430 was specifically engineered to replace oil based lubricants in the toughest draws on the hardest metals. ADDVANCE 5430 is a unique, no oil, renewable resource formulation that will provide the operator with benefits that are unattainable with traditional oil based lubricants. This stateof-the-art chemistry affords the ultimate in lubricity, personnel safety, and environmental compatibility. ADDVANCE 5430 provides the benefits of a chlorinated lubricant without the use of chlorinated paraffin. ADDVANCE 5430 is the ideal choice for heavy-duty stamping, blanking and deep drawing operations on all metals including the hardest alloys.

#### Benefits

- Outstanding Corrosion Protection
- Eliminates smoke and oil residues
- Anti-wear package
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible

- Cleaner/safer press room environment
- Non-Staining safe on yellow metals
- Non-staining safe on white metals
- Contains no hazardous materials
- Reduces post finishing costs
- Cost-effective low end use costs

#### Applications

- Progressive and compound die stamping .
- Heavy gauge stamping
- Single hit deep drawing
- Stainless Steel deep drawing Heavy gauge blanking

### Directions for Use

ADDVANCE 5430 can be used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ration will depend on the type of metal formed, thickness of the metal, operation and application method.

### Packaging

ADDVANCE 5430 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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#### **Texas Facility**

Addvance

PROPERTIES

Appearance

Odor

Specific Gravity

@ 70° F

Water Solubility

pH (10%)

Viscosity

Amber, viscous

liquid

Bland

1.05 - 1.10

Complete

8.5 - 9.0

1500 S.U.S. @

100°F

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Extruding

- End-forming
- Punching/ piercing
- Notching
- Wiredrawing

### ADDVANCE 2100-AL3 Synthetic Metal-Forming Lubricant for Aluminum

### Product Description

ADDVANCE 2100-AL3 is designed specifically for metalworking and metal forming of aluminum. It provides high level lubricity performance; which can offset the use of conventional chlorinated additives. This product will enhance performance in aluminum metalworking applications which utilize a water soluble design. It does not contain petroleum oil, chlorine or sulfur. It is non-toxic and environmentally compatible. ADDVANCE 2100-AL3 is water-white and water-thin. It is particularly recommended for thin-gauge aluminum jobs where an invisible residue and viewing of the work piece is preferred.

### Usage Recommendation

ADDVANCE 2100-AL3 is 100% water soluble. Use at levels up to 10% (10 to 1) for most non-ferrous metal removal and drawing/ stamping operations.

Always test by:

- 1) Wipe die with a clean shop rag
- 2) Coat die and blank with ADDVANCE 2100-AL3
- Maintain continuous coverage during run via manual, roller-coat or airless spray

### <u>Technical Data</u>

Appearance Water Solubility Specific Gravity Density Flash Point pH @ 1:10 Freeze/ Thaw Label Cautions Bright & Clear Colorless 100% 1.01 (Typical) 8.37 lbs. /gal. (Typical) None 8.9 (Typical) Reconstitutes at Room Temperature Do NOT Use with Nitrosating Agents



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The Metalloid Partnership Advantage

ADDVANCE 6580 Heavy-Duty Aluminum Forming Lubriacnt

### Product Description

**ADDVANCE 6580** is designed specifically for metalworking and metal forming of aluminum. It provides high level lubricity performance; which can offset the use of conventional chlorinated additives. This product will enhance performance in aluminum metalworking applications which utilize a water soluble design. It does not contain petroleum oil, chlorine or sulfur. It is non-toxic and environmentally compatible. **ADDVANCE 6580** is water-white and water-thin. It is particularly recommended for thin-gauge aluminum jobs where an invisible residue and viewing of the work piece is preferred.

### **Usage Recommendation**

**ADDVANCE 6580** is 100% water soluble. Use at levels up to 5% (20 to 1) for most non-ferrous metal removal and drawing/ stamping operations.

Always test by:

- 1) Wipe die with a clean shop rag
- Coat die and blank with ADDVANCE 6580
- Maintain continuous coverage during run via manual, roller-coat or airless spray

#### Technical Data

Appearance Water Solubility Specific Gravity Density Flash Point pH @ 1:10 Freeze/ Thaw Label Cautions Bright & Clear Colorless 100% 1.01 (Typical) 8.37 lbs. /gal. (Typical) None 8.5 (Typical) Reconstitutes at Room Temperature Do <u>NOT</u> Use with Nitrosating Agents



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### ADDVANCE 6323 VOC-FREE VANISHING LUBRICANT

ONE SOURCE ... ONE SOLUTION ... ONE WORLD

Addvance

### Product Description

ADDVANCE 6323 is a water-based vanishing lubricant for light to medium duty forming operations. ADDVANCE 6323 contains NO VOC's or volatile petroleum solvents. This lubricant is formulated using renewable resources that are both biodegradable and botanical in origin. ADDVANCE 6323 has better evaporative properties than traditional solvent based vanishing lubricants. It will leave a clean, low-residue surface on metal.

### **Benefits**

- NO VOC's
- ✓ 100% Biodegradable
- ✓ Fast evaporation
- ✓ Excellent corrosion protection
- √ Multi-metal compatible
- ✓ Excellent lubricity
- $\sqrt{}$  No petroleum or extreme pressure additives
- ✓ Environment and Operator Friendly
- $\sqrt{}$  Outstanding metal wetting properties

### **Directions for Use**

ADDVANCE 6323 is used as received and applied by spray, roller, drip or flooding applications.

### **Properties**

Appearance	Clear, water white liquid	Water Solubility	Complete	
Odor	Characteristic	pH	9.2	3
Specific Gravity	1.08 - 1.10	Biodegradability	100%	-
Renewable Resources	Yes	<b>Evaporation Rate</b>	Appox. Same as water	Λ

### Packaging

ADDVANCE 6323 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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### **ADDVANCE 5560** Synthetic Metal-Forming Lubricant for Aluminum



### **Product Description**

ADDVANCE 5560 is designed specifically for metalworking and metal forming of aluminum. It provides high level lubricity performance; which can offset the use of conventional chlorinated additives. This product will enhance performance in aluminum metalworking applications which utilize a water soluble design. ADDVANCE 5560 leaves a soft, non-tacky residue which will not build up on roll dies. It does not contain petroleum oil, chlorine or sulfur. It is non-toxic and environmentally compatible. It is water-white and water-thin. It is particularly recommended for thin-gauge aluminum jobs where an invisible residue and viewing of the work piece is preferred. Heavier dilutions can be used for deep drawing.

### Directions for Use

ADDVANCE 5560 is 100% water soluble. Light Duty use at levels up to 10% (10 to 1) for most non-ferrous metal removal and drawing/ stamping operations. Deep drawing can be used starting at 50%.

Always test by:

- 1) Wipe die with a clean shop rag
- 2) Coat die and blank with ADDVANCE 5560
- 3) Maintain continuous coverage during run via manual, roller-coat or airless spray

### **Technical Data**

Appearance Water Solubility Specific Gravity Density Flash Point pH@1:10 Freeze/ Thaw Label Cautions

Bright& Clear Colorless 100% .90 7.5 lbs./gal. None 8.8 (Typical) Reconstitutes at Room Temperature Do NOT Use with Nitrosating Agents

### Packaging

ADDVANCE 5560 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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### **ADDVANCE 6370 Heavy-Duty Botanical** Metalforming Lubricant



ADDVANCE 6370 is a heavy-duty biodegradable metal forming lubricant for the most severe of operations. ADDVANCE 6370 was specifically engineered to replace oil based lubricants in the toughest draws on the hardest metals. ADDVANCE 6370 is a unique, no oil, renewable resource formulation that will provide the operator with benefits that are unattainable with traditional oil based lubricants. This state-of-the art chemistry affords the ultimate in lubricity, personal safety and environmental compatibility. ADDVANCE 6370 provides the benefits of a chlorinated lubricant without the use of chlorinated paraffins. ADDVANCE 6370 is the ideal choice for heavy-duty stamping, blanking, deep drawing and end forming operations on all metals including the hardest alloys. Leaves a very dry residue when diluted 10% or more.

### Benefits

- Outstanding Corrosion Protection
- Eliminates smoke and oil residues
- Botanical anti-wear package reduces part breakage, galling, tearing and wrinkling.
- Cleans off easily
- Excellent die life and anti-wear properties
- Multi-metal compatible

### Applications

- Progressive and compound die stamping
- Heavy gauge stamping
- Single hit deep drawing
- Stainless Steel deep drawing
- Heavy gauge blanking

### Directions for Use

ADDVANCE 6370 can be used as received or diluted with water depending on the severity of the operation. The diluted solution can be applied by spray, roller, drip or immersion methods. The appropriate ration will depend on the type of metal formed, thickness of the metal, operation and application method.

### Packaging

ADDVANCE 6370 is available in 5 gallon pails, 55 gallon drums and 330 gallon totes.

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### **Texas Facility**

Advance

PROPERTIES

Appearance

Odor

Specific Gravity

@ 70° F

Water Solubility

pH (10%)

Amber, viscous

liquid

Bland

1.032

Complete

90

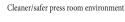
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USDA

CERTIFIED

PRODUC

PRODUCT 68%



- Ideal choice for aluminum drawing
- Contains no hazardous materials
- Biodegradable, operator friendly
- Reduces post finishing costs
- Cost-effective low end use costs
  - Extruding
  - End-forming
  - Punching/ piercing
  - Notching
  - Spinning

**ADDVANCE MF-127** Heavy-Duty **Botanical Based Metal Forming Lubricant** 



ADDVANCE MF-127 is designed specifically for the most difficult metalforming operations. It provides high level lubricity performance; which can offset the use of conventional chlorinated additives. This product will enhance performance in all types of ferrous metalworking applications which utilize a water soluble design. It does not contain petroleum oil, chlorine or sulfur. It is non-toxic and environmentally compatible. ADDVANCE MF-127 optimizes the botanical content for the most economical design. It may be removed with a mild alkaline spray or warm water rinse.

PROPERTIES		
Appearance	Bright & Clear Straw Amber	
Water Solubility	100%	
Specific Gravity	1.01 (Typical)	
Density	8.43 lbs/gal (Typical)	
Flash Point	None	
pH @ 1:10	8.7 (Typical)	
Rust Protection @ 1.20 (5%)	Excellent	
Freeze/ Thaw	Reconstitutes at Room Temperature	
Label Cautions	Do NOT Use with Nitrosating Agents	



USDA

Certified

BIOBASED

PRODUCT

### Directions for Use

ADDVANCE MF-127 is 100% water soluble. Use at levels up to 20% (5:1) for heavy-duty metal removal and drawing/stamping operations. Always test by:

- 1) Wipe die with a clean shop rag
- 2) Coat die and blank with ADDVANCE MF-127
- 3) Maintain continuous coverage during run via manual, roller-coat or spray

### Packaging ADDVANCE MF-127 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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### METCHEM 6620 Synthetic Metalforming Lubricant



### DESCRIPTION

### The Metalloid Partnership Advantage

**METCHEM 6620** is a highly concentrated, synthetic lubricant designed for heavyduty metalforming operations on ferrous and non-ferrous metals. The unique formulation of **METCHEM 6620** is designed as a base lubricant and sold in predetermined, specific dilutions depending on application. (See Directions for Use)

### **BENEFITS**

Automotive approved Outstanding corrosion protection Excellent die life Easily cleaned off Weldable

### APPLICATIONS

Forming unpolished cold rolled steel alloys Forming galvanneal and galvanized coil stock Forming 6000 series aluminum alloys Forming HSLA steels Forming automotive parts on progressive dies

### **SPECIFICATIONS**

Specific Gravity @70°F1	.102
pH, concentrate	95

### DIRECTIONS FOR USE

METCHEM 6620 is sold as a pre-diluted solution and can be used as received or further diluted with water by end user according to specific application.

### PACKAGING: METCHEM 6620 is available in 5-gallon pails, 55-gallon drums

or 330-gallon totes

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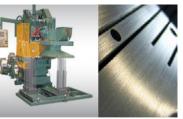
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### METDRAW 6640 Bio-Renewable Tube Bending Lubricant





### **Product Description**

METDRAW 6640 is a heavy-duty, *bio-renewable* tube bending lubricant for all metals. METDRAW 6640 is oil free and employs only natural and bio-degradable ingredients. It is formulated to bend stainless steels, carbon steels, aluminum and copper alloys of all tube diameters and wall thicknesses. The lubricant film can be removed easily with water or low alkaline cleaners.

### Benefits

- · Hydrodynamic, boundary and extreme pressure lubrication in one product.
- · Ideal for tough bends on exotic alloys.
- Multi-metal lubrication: stainless steels, coated metals and aluminum alloys.
- Maximizes tool and die life.
- Ultra low surface tension insures metal wetting and coverage.
- Safe No hazardous materials, oil, solvents or flammability hazards.
- Cleans off easily high detergency maximizes cleaning efficiency.
- · Protects metals from humidity, red and white rusts and galvanic staining.

### Applications

- Tube bending
- · Deep drawing of blanks
- Tube expanding
- Tube end-forming
- Wiredrawing

### **Directions For Use:**

METDRAW 6640 should be used as received or thinned to desired consistency by adding water to the lubricant to achieve the desired viscosity.

### Packaging:

METDRAW 6640 is available in 5 gallon pails and 55 gallon drums.

### The Metalloid Partnership Advantage



Appearance	Tan colored smooth
	paste
Odor	Bland
Flash Point	None
Sulfur	None
Mineral Oil	None
Chlorine	None
Solvents	None
Biodegradable	Yes
Solubility	Dispersible in water
Specific Gravity	0.9714 @72°F

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www.metalloidcorp.com/metalworking

### **METCOR 52** Water Based **Corrosion Preventative**



### **Product Description**

METCOR 52 is an oil free, biodegradable, indoor corrosion preventative for all metals, METCOR 52 uses "Green Chemistry" derived from botanical renewal resources. METCOR 52 is both people and earth friendly without sacrificing performance.

### Benefits

- Compatible with most alloys
- Heat treatable film
- Contains no hazardous oils or solvents
- Easy to remove or clean off

### Applications

- Final rinse protection in cleaner lines
- Additive to enhance vibratory cleaning/protection
- In-transit part protection

- Biodegradable
- Long term indoor protection
- Dry transparent film .
- Dip coating machined parts
- In process protection prior to painting, plating or finishing



METCOR 52 can be used as received or diluted down to 1:10 with water for lighter film weights. The deposited protective film will dry to a semi hard transparent coating. This coating seals the metal surface offering substantial indoor corrosion protection to both ferrous and non-ferrous metals.

### Packaging

METCOR 52 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

PROPERTIES			
Appearance Light brown, hazy liquid		Flash Point	None
Odor	Bland	Protection	Short term, indoor
Water Solubility	Completely at all proportions	Film	Semi hard

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### METCOR 57 Solvent Based Corrosion Preventative



### PRODUCT LINE

Metalloid Corporation manufactures a complete line of industrial metalworking fluids and cleaners. Metalloid's product line includes, but is not limited to Machining and Grinding Coolants, Stamping and Forming Fluids, Corrosion Inhibitors, Swiss Cutting Oils and Aqueous Cleaners.

#### PRODUCT DESCRIPTION

METCOR 57 is a solvent based corrosion preventative for long-term indoor protection of ferrous and non-ferrous metals. METCOR 57 is fast drying, water displacing, and non-staining. The deposited dry film "seals off" metal surfaces from moisture and humidity on contact. METCOR 57 is ideally suited to protect corrosive sensitive metals and alloys.

### **BENEFITS**

Long term indoor protection Excellent penetrating and wetting properties Resists moisture and humidity Fingerprint neutralizer Multi-metal safe Fast drying, non-gumming film protection Easy to use – no mixing or measuring Easy to clean off Clear film for optimal part identification Economical – low end use cost

#### APPLICATIONS

Protects coil, bar, tube and sheet stock Protects dies, tools, machine surfaces Protects gauges, files and hand tools Protects sensitive case iron parts

#### DIRECTIONS FOR USE

METCOR 57 is used as received. Application methods include spraying, brushing, rolling or dip tank.

#### PACKAGING

METCOR 57 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk

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Protects all moving parts

Prevents "flash rusting"

Protects shipped or stored parts

Use for long-term protection

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Properties	
Appearance	Clear amber liquid
Odor	Characteristic
Water	Insoluble
Solubility	
Flash Point	150-160° F
Protection	Long term 6 mo to 1 yr indoor
Film	Dry

### **METCOR 71 Botanical Based Corrosion Preventative**



Metco

### Product Description

METCOR 71 is a botanical-based, environmentally friendly, corrosion preventative. This product is formulated with bio-renewable and bio-sustainable resources and is both bio-degradable and is chemically neutral. METCOR 71 will protect all metal surfaces from moisture, high humidity and salt spray vapors. METCOR 71 contains no petroleum oil or hazardous materials.

### Benefits

- Outstanding "wet-out" properties for . uniform part coverage
- Penetrates and seals hard to get at metal surfaces
- Safe on steels, yellow, white and red metals
- Lubricates and cleans while protecting moving parts

### Applications

- General long-term rust protection of all metals
- Dip tank cleaning and protection of small parts

### Directions For Use

METCOR 71 is used as received and applied by roller, spray or dip methods.

### Packaging

METCOR 71 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

- Protects parts during long-term storage and/or covered transit
- Heat treatable ashless formulation
- Safe "GREEN" formulation is both environment and people friendly
- Protective coating prevents "white rust" on galvanized or aluminum alloys

Protect hand tools and cutlery

Lubricate moving mechanisms

	PROI	PERTIES	
Appearance	Dark amber , clear liquid	Cloud Point	-12°C
Odor	Characteristic	Bio-Degradability	100%
Viscosity	41 S.U.S. @ 100°F	Petroleum Oil	None
Specific Gravity	0.8850 to .08890 @ 70°F		

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### METKLEEN 2080 **ALL Purpose – All Metal Cleaner and Degreaser**



### PRODUCT LINE

Metalloid Corporation manufactures a complete line of industrial metalworking fluids and cleaners. Metalloid's product line includes, but is not limited to Machining and Grinding Coolants, Stamping and Forming Fluids, Corrosion Inhibitors, Swiss Cutting Oils and Aqueous Cleaners.

#### PRODUCT DESCRIPTION

METKLEEN 2080 is a low alkaline, all purpose cleaner for all metals with uncommonly high detergency and soil suspending properties. METKLEEN 2080 is the ultimate choice for vibratory cleaning due to its low surface tension surfactants and high detergency builders. METKLEEN 2080 contains a "built-in" rust protection package to protect parts and media during processing.

### BENEFITS

- ✓ Exceptional wetting and rinsing properties
- ✓ Outstanding in-process rust prevention
- ✓ No foam when hot low foam when cold
- ✓ Excellent "soil suspending" properties
- ✓ Safe on the most sensitive metals
- ✓ Economical cleans at low temperatures
- ✓ Unique oil splitting characteristics
- ✓ Non-hazardous safe mild
- ✓ Non-chelating easy to treat for waste disposal.

### CLEANING PROCESSES

- Vibratory cleaning
- ✓ Multi-stage spray washers
- Rotary barrel cleaning Hot tank cleaning
- ✓ Small parts cleaning ✓ Plating lines

#### DIRECTIONS FOR USE

METKLEEN 2080 is typically diluted in water between 2% and 10% dependent on soil composition, water temperature, dwell time and cleaner application method. METKLEEN 2080 is formulated to clean between 60° and 150° F.

#### PACKAGING

METKLEEN 2080 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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### The Metalloid Partnership Advantage



Properties		
Appearance	Blue liquid	
Odor	Characteristic	
Water Solubility	Complete at all proportions	
pH (concentrate)	10.2	
Flash Point	None	
Specific Gravity	1.08	

Consult your Metalloid representative for cleaner dispensers and titration kits.

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### **METKLEEN 2090** Soft Metal Spray Wash Cleaner



### PRODUCT LINE

Metalloid Corporation manufactures a complete line of industrial metalworking fluids and cleaners. Metalloid's product line includes, but is not limited to Machining and Grinding Coolants, Stamping and Forming Fluids, Corrosion Inhibitors, Swiss Cutting Oils and Aqueous Cleaners.

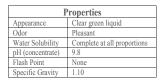
#### PRODUCT DESCRIPTION

METKLEEN 2090 is a low alkaline, aqueous spray wash cleaner for soft metals. The unique surfactant chemistry optimizes detergency and oil " split-out" from the cleaner bath for improved waste treatment. METKLEEN 2090, while aggressive against petroleum based soils is mild on sensitive metals and finishing equipment.

#### BENEFITS

Outstanding oil rejection Non-staining on soft metals Easy waste treatment Non-foaming - hard water stable Improves finishes - "Brightens & Cleans" Economical - cleans at low temperatures High operator acceptance - mild on hands and safe to use Compatible with many paint and coating films Rinses off easily without spotting Balanced pH for optimum detergency

### The Metalloid Partnership Advantage



#### CLEANING PROCESSES

Aluminum spray cleaning Cleans off coolants & die lubes Wipe down cleaning Janitorial hard surface cleaning High pressure power washing Pre-clean on conversion coating lines Safe on hi-tech and electrical components Copper rod, wire and tube cleaning

#### DIRECTIONS FOR USE

METKLEEN 2090 is typically diluted in water between 1% and 10% dependent on soil composition, water temperature, dwell time and cleaner application method. Increasing water temperature accelerates soil removal. METKLEEN 2090 was formulated to clean between 75° and 150° F. Hard or soft waters can be used for make-up without adverse effect on performance.

Consult your Metalloid representative for cleaner dispensers and titration kits.

#### PACKAGING

METKLEEN 2090 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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### **METKLEEN 2120** Soft Metal Hot-Tank Cleaner



### PRODUCT LINE

The Metalloid Partnership Advantage

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### PRODUCT DESCRIPTION

METKLEEN 2120 is a low alkaline, aqueous hot-tank cleaner for soft metals. The unique surfactant chemistry optimizes detergency and oil "split-out" from the cleaner bath for improved waste treatment. METKLEEN 2120, while aggressive against petroleum based soils is mild on sensitive metals and finishing equipment.

#### BENEFITS

Outstanding oil rejection Non-staining on soft metals Easy waste treatment Low foaming - hard water stable Improves finishes - "Brightens & Cleans" Economical - cleans at low temperatures High operator acceptance - mild on hands and safe to use Compatible with many paint and coating films Rinses off easily without spotting Balanced pH for optimum detergency

#### CLEANING PROCESSES

Hot-tank cleaning Cleans off coolants & die lubes Wipe down cleaning Janitorial hard surface cleaning Cleans small parts

High pressure power washing Pre-clean on conversion coating lines Safe on hi-tech and electrical components Cleans non-ferrous rod and wire Cleans castings, extrusions, sheet stock

#### DIRECTIONS FOR USE

METKLEEN 2120 is typically diluted in water between 5% and 10% dependent on soil composition, water temperature, dwell time and cleaner application method. Increasing water temperature accelerates soil removal. METKLEEN 2120 was formulated to clean between 120° and 130° F. Hard or soft waters can be used for make-up without adverse effect on performance.

Properties Clear green liquid Appearance Odor Pleasant Complete at all proportions Water Solubility pH (concentrate) Flash Point Specific Gravity

#### PACKAGING

METKLEEN 2120 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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Consult your Metalloid representative for cleaner dispensers and titration kits.

### **METKLEEN 2140** Floor/Maintenance Cleaner



#### PRODUCT LINE

Metalloid Corporation manufactures a complete line of industrial metalworking fluids and cleaners. Metalloid's product line includes, but is not limited to Machining and Grinding Coolants, Stamping and Forming Fluids, Corrosion Inhibitors, Swiss Cutting Oils and Aqueous Cleaners.

### PRODUCT DESCRIPTION

METKLEEN 2140 is a heavy-duty floor and all purpose maintenance cleaner. This high detergency, hard surface cleaner simultaneously cleans and deodorizes the most heavily soiled surfaces. The unique wetting properties of METKLEEN 2140 enhances detergency and soil penetration. METKLEEN 2140 is an excellent choice to remove the toughest oils, greases and shop soils.

#### BENEFITS

Leaves floors Clean & Dry! Hard water stable Multifunctional - cleans and deodorizes Cleans well in cold water Economical - highly concentrate Safe on ferrous and non-ferrous metals Safe on plastic, glass, ceramics and linoleum Removes tire tracks, grease, carbon, and other hard to remove soils

#### CLEANING PROCESSES

Floor scrubbers Mop & brush cleaning Spray bottle cleaning Janitorial hard surface cleaning

Soak cleaning Wipe down cleaning Tank and sump cleaning Machine & part cleaning

#### DIRECTIONS FOR USE

METKLEEN 2140 can be diluted with water at any temperature. For tough soils increase the concentration and water temperature accordingly. Cleaning performance is influenced by application, time, temperature, concentration and soil composition.

Recommended Starting Dilutions		
Automatic floor scrubbers	1:25 to 1:50	
General Maintenance cleaning	1:20 to 1:100	
Hot tank cleaning	1:10 to 1:20	
Wipe down cleaning	1:30 to 1:40	
Machine & part cleaning	1:10 to 1:20	

#### Properties Appearance Clear green liquid Odor Pleasant Water Solubility Complete at all proportions pH (concentrate) 11 Flash Point None Specific Gravity 1.07

Consult your Metalloid representative for cleaner dispensers and titration kits.

PACKAGING: METKLEEN 2140 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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METKLEEN 2150 Heavy-Duty Spray and **Tank Cleaner For Steel** 



#### PRODUCT LINE

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#### PRODUCT DESCRIPTION

METKLEEN 2150 is a high alkaline, aqueous cleaner for ferrous metals that require removal of difficult soils and/or oils at low temperature. METKLEEN 2150 neutralizes and lifts even the toughest water insoluble oils, greases and shop soils. METKLEEN 2150 is the ideal choice to replace solvent cleaners and the hazards associated with their use.

#### BENEFITS

- Versatile used in multiple cleaning processes
- ✓ Low temperatures cost effective cleaning
- Non-foaming high wetting formulation
- Outstanding oil splitting properties
- Heavy-duty high detergency fast acting.
- ✓ Safe on steel, stainless, copper, brass, magnesium and titanium
- ✓ Removes heavy drawing lubricants, greases, carbon deposits, etc.

#### CLEANING PROCESSES

- High pressure cleaning Rotary barrel cleaning Hot tank cleaning
- ✓ Coil cleaning
- ✓ Engine parts cleaning
  - ✓ Pretreatment cleaning

#### DIRECTIONS FOR USE

METKLEEN 2150 is typically used in solution with water between 1% to 10% depending on soil composition, water temperature, dwell time and application method. Corrosion prevention is necessary to protect the freshly cleaned metal surfaces. Increasing water temperature accelerates soil removal. METKLEEN 2150 was formulated for low temperature cleaning between 60° to 180° F. Hard or soft waters can be used for make-up without adverse effect on performance.

### The Metalloid Partnership Advantage



Properties		
Appearance	Colorless, clear liquid	
Odor	Bland	
Water Solubility	Complete at all proporations	
pH (5%)	13.2	
Flash Point	None	
Specific Gravity	1.3	

Consult your Metalloid representative for cleaner dispensers and titration kits.

#### PACKAGING:

METKLEEN 2150 is available in 5 gallon pails, 55 gallon drums, 330 gallon totes and bulk.

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No one understands metalworking fluids better than Metalloid, so no one else can bring you advanced technology that works on the issues that matter to you. Get the whole story by calling Metalloid at 800.686.3201.



Michigan Facility 1160 White Street Sturgis, MI 49091 telephone 269,503,7300 facsimile 269.503.7795 www.metalloidcorp.com/metalworking

#### Texas Facility

1720 N. Quevado St. Jacksonville, TX 75766 telephone 903.589.3933 facsimile 903.589.3924

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### ADDVANCE BOTANICAL HAND CLEANER



ADDVANCE BOTANICAL HAND CLEANER is a heavy duty waterless or water dilutable detergent for hand washing in the machine shop or any industrial facility. This hand cleaner is composed of coconut and other botanical (green) ingredients. This unique formulation provides high detergency and emollient properties in a mild gentle to use hand cleaner.

### Benefits

- Botanical based gentle on skin
- Versatile used as received or diluted
- Cost effective super concentrated
- Pleasant odor
- Unlimited shelf life
- Exceptional cleaning in hard or soft water
- Exceptional cleaning in cold or hot water
- Removes tough soils grease, oil, graphite, paint/ coating residues and marking inks
- Environment safe renewable resource

### Directions for Use

ADDVANCE HAND CLEANER can be used as received or diluted with water depending on the severity of the soil. Apply a few drops in the palm of the hand and rub hands together to remove even the most difficult soil.

PROPERTIES			
Appearance	Yellow viscous fluid	Biodegradable	Yes
Green Product	Yes	Green Product	Yes
Renewable Resource	Yes	Flammable	No

### Packaging

ADDVANCE HAND CLEANER is available in several convenient package formats:

8 oz. Refillable Squeeze Bottles Quarts One Gallon Containers Fifty-Five Gallon Drums Case of 12 8 oz. Refillable Squeeze Bottles 16 oz Pints Five Gallon Pails



Addvance

USDA

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BIOBASED PRODUCT

PRODUCT 67

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