

CHEMICAL METHODS

I N C O R P O R A T E D

WATER TABLE WINNERS!

Metal Cutting & Fabrication Product Line



CHEMICAL METHODS
20338 PROGRESS DRIVE
CLEVELAND, OHIO 44149
Phone: 216-476-8400
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Cutting Table Corrosion Inhibitors

Water table (or cutting table) corrosion inhibitors are designed to prevent corrosion of the cutting equipment and impart rust protection to the work pieces in metal fabrication operations. Operations such as plasma torch, oxy-acetylene, and MAPP gas cutting operations that utilize water tables need these treatments to keep rust and bacterial growth from forming and fouling the operation. Free titration kits are available to monitor the treatment level as the months go by. Proper maintenance of these fluids can greatly extend the life of the bath.

CM-1000-G Cutting Table Corrosion Inhibitor is our most popular “Plasma Quench Type” treatment based on industry standard chemistry. It contains fluorescent green colorant that can be used as an indicator of solution strength.

CM-1000-P Cutting Table Corrosion Inhibitor is an economical powdered version of CM-1000-G for use in very large water tables.

CM-1000-S Cutting Table Corrosion Inhibitor is a concentrated, long lasting treatment for operations processing steel only. This product will attack aluminum with prolonged exposure.

CM-1003 Cutting Table Corrosion Inhibitor is non-flammable, non-hazardous, non-toxic, non-foaming, and safe for use on aluminum and galvanized metals.

CM-1003-D Cutting Table Corrosion Inhibitor is an easy to use combination of CM-1003 and CM-1014 Green Water Table Dye.

Water Jet Cutting inhibitors

CM-1004 Water Jet Inhibitor provides corrosion protection and anti-fouling properties to water used in jet cutting operations. **CM-1004-AL Water Jet Inhibitor** is recommended for operations processing aluminum.

Water Table Dyes

CM-1014 Green Water Table Dye and **CM-1021 Black Water Table Dye** are water stable, non-flammable powders that will effectively filter visible infrared and ultraviolet light in Plasma Arc and Laser Cutting Operations. Recommended for use with CM-1003 and CM-1000-S inhibitors.

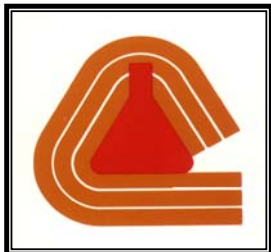
Welding Anti-Spatter

Our anti-spatter formulations incorporate a unique chemistry that performs the dual function of preventing the weld spatter from adhering to metal surfaces and providing up to 8 weeks indoor storage corrosion protection. Products are applied by spray, soak or simply brushed on. **CM-1204 Weld Anti-Spatter** is a concentrate to be diluted in water. **CM-1205-B Weld Anti-Spatter** is in “ready to use” form.

Water Table Anti Freeze

CM-33 Water Table Anti Freeze reduces the temperature at which the fluid in a water table will freeze. CM-33 will not interfere with the cutting operation or subsequent forming or finishing operations.

- **Chemical Methods also offers complete lines of metalworking fluids, corrosion inhibitors and metal finishing products. Please contact a Chemical Methods sales representative to review your product needs. Discounts on Water Table Products are available when other chemical products are purchased! ■**



Chemical Methods, Inc.

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TECHNICAL DATA SHEET

CM-1000-G **PLASMA QUENCH WATER TABLE CORROSION INHIBITOR**

PRODUCT DESCRIPTION

CM-1000-G is a liquid corrosion inhibitor that protects metals in water tables commonly used in metal fabrication operations such as plasma torch, oxy-acetylene, and MAPP gas cutting operations. The chemistry of **CM-1000-G** inhibits corrosion and eliminates foul odors in stagnant or agitated water tables. **CM-1000-G** used at a concentration of 5%, provides up to eight weeks indoor corrosion protection for all ferrous and non-ferrous metals. **CM-1000-G** will prevent corrosion of the water table and the work piece by providing a non-tacky protective film that will not interfere with further finishing operations. **CM-1000-G** contains no flammable solvents, oils, waxes, silicates, or nitrosamines. **CM-1000-G** was designed with the objective of extending the life and integrity of the cutting table and work piece.

FEATURES & BENEFITS

- Provides corrosion protection for in-plant storage
- Prevents rancidity and foul odors
- Industry standard chemistry for application
- Free titration kit
- Yellow-Green color at dilution

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear Amber Liquid
Appearance at Dilution:	Clear Yellow-Green Liquid
pH:	10.5 (neat); 10.0 at 5% dilution
Specific Gravity:	1.083 (9.04 lbs./gallon)

USE DIRECTIONS

CM-1000-G is to be charged and maintained at a 3-7% concentration by volume in the water table. A 5% dilution by volume (1:20) is typical target for steel operations. If aluminum is in the product mix, a concentration of 3-4% (1:33) should be targeted. It is recommended the water table be drained and recharged with a fresh **CM-1000-G** solution every 8-12 months or when dragout, spills, or leaks demand. If the pH of the water table drops below 9, the water table should be drained and recharged with fresh **CM-1000-G** solution. The pH is easily determined by using pH strips. Free titration test kits are available for improved monitoring of the solution. Proper maintenance of fluid concentration will extend bath life.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1000-G is available 5 gallon pails, 55 gallon drums, and 330 gallon totes FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1000-P

PLASMA QUENCH WATER TABLE CORROSION INHIBITOR POWDER

PRODUCT DESCRIPTION

CM-1000-P is a corrosion inhibitor that protects metals in water tables commonly used in metal fabrication operations such as plasma torch, oxy-acetylene, and MAPP gas cutting operations. The unique chemistry of **CM-1000-P** inhibits corrosion and foul odors in stagnant or agitated water tables. **CM-1000-P** used at a concentration of 50 pounds per 1000 gallons, provides up to eight weeks indoor corrosion protection for all ferrous and non-ferrous metals.

CM-1000-P will prevent corrosion of the water table and the work piece by providing a non-tacky protective film that will **not** interfere with further finishing operations. **CM-1000-P** contains no flammable solvents, oils, waxes, or nitrosamines.

FEATURES & BENEFITS

- Excellent corrosion protection for in-plant storage
- Prevents rancidity and foul odors
- Industry standard chemistry for application
- Economical Powder
- Free titration kit
- Yellow-Green color at dilution

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow-Orange Powder
Appearance at Dilution: Clear Yellow-Green Liquid
pH: 10.0 at dilution

USE DIRECTIONS

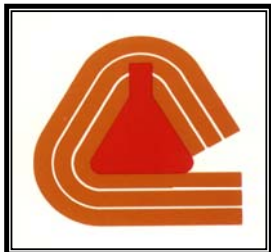
CM-1000-P is to be charged and maintained at a 50 lb/1000 gallon concentration in the water table. It is recommended the water table be drained and recharged with a fresh **CM-1000-P** solution every 8-12 months or when dragout, spills or leaks demand. If the pH of the water table drops below 9, the water table should be drained and recharged with fresh **CM-1000-P**. The pH is easily determined by using pH test strips. Free titration test kits are available for improved monitoring of the solution. Proper maintenance of fluid concentration will extend bath life

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1000-P is available in 450 pound drums - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1000-S WATER TABLE CORROSION INHIBITOR

PRODUCT DESCRIPTION

CM-1000-S is a liquid corrosion inhibitor that protects metals in water tables commonly used in metal fabrication operations such as plasma torch, oxy-acetylene, and MAPP gas cutting operations. **CM-1000-S** was developed in cooperation with a major producer of plasma arc cutting tables with the objective of eliminating health and safety hazards and extending the life and integrity of the cutting table and work piece. The unique chemistry of **CM-1000-S** neutralizes the toxic nitrous oxide gases emitted during the plasma cutting operation, minimizing operator exposure to potential hazards. **CM-1000-S** used at a concentration of 5%, provides up to eight weeks indoor corrosion protection for all ferrous metals. **CM-1000-S** inhibits corrosion and eliminates foul odors in stagnant or agitated water tables. **CM-1000-S** will prevent corrosion of the water table and the work piece by providing a non-tacky protective film that will not interfere with further finishing operations. **CM-1000-S** contains no flammable solvents, oils, waxes, silicates, or nitrosamines. **CM-1000-S** will attack aluminum with prolonged exposure.

FEATURES & BENEFITS

- Excellent corrosion protection for in-plant storage
- Prevents rancidity and foul odors
- Concentrated formulation
- Free titration kit
- Colorless at dilution

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Pink Liquid
Appearance at Dilution:	Clear Liquid
pH:	11.7 +/- 0.4
Specific Gravity:	1.284 (10.71 lbs./gallon)

USE DIRECTIONS

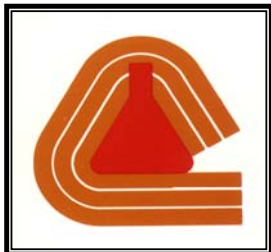
CM-1000-S is to be charged and maintained at a 2-5% concentration by volume in the water table. A 4% dilution by volume (1:25) is typical target for steel operations. It is recommended the water table be drained and recharged with a fresh **CM-1000-S** solution every 8-12 months or when dragout, spills, or leaks demand. If the pH of the water table drops below 9, the water table should be drained and recharged with fresh **CM-1000-S** solution. The pH is easily determined by using pH strips. Free titration test kits are available for improved monitoring of the solution. Proper maintenance of fluid concentration will extend bath life

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1000-S is available 5 gallon pails, 55 gallon drums, and 330 gallon totes FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1003

WATER TABLE CORROSION INHIBITOR

PRODUCT DESCRIPTION

CM-1003 Water Table Corrosion Inhibitor is a liquid corrosion inhibitor designed for use in water table cutting operations such as plasma-arc and oxy-fuel operations. **CM-1003** provides continuous corrosion protection for water tables and imparts 4 to 6 weeks of indoor storage corrosion protection for your work piece. It is safe for use on aluminum and galvanized metals. The unique chemistry of **CM-1003** provides a semi-dry protective film that will not interfere with further machining, welding, or finishing operations. **CM-1003** prevents bacteria growth and the generation of Monday morning odors. **CM-1003** does not contain flammable solvents, oils, biocides, nitrites, silicates, silicones, waxes, or nitrosoamines.

BENEFITS

- Non-toxic; non-hazardous; non-flammable; non-foaming
- Free titration kit
- Prevents obnoxious bath odors
- Concentrated formulation
- Also available with CM-1014 Dye pre-added – **CM-1003-D**
- Not Regulated by DOT

PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate	Clear Liquid
Appearance, 5% Dilution	Clear Liquid
Specific Gravity	1.020 (8.51 lbs./gallon)
pH	9.6 +/- 0.4

USE DIRECTIONS

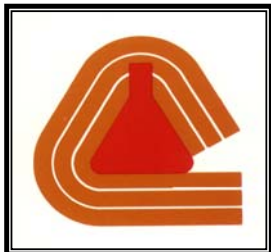
Use **CM-1003** at a 4% to 10% concentration by volume – 5% is typically the target. Actual use concentration will depend on corrosion resistance requirements for your work piece and water table. Proper maintenance of fluid concentration will extend bath life. Free titration kits are available to assist with monitoring. It is recommended that your water table be drained, cleaned and recharged every 6-12 months.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

AVAILABILITY

CM-1003 is available 5 gallon pails, 55 gallon drums, and 330 gallon totes FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1004

WATER JET CUTTER CORROSION INHIBITOR

PRODUCT DESCRIPTION

CM-1004 is an environmentally friendly water based corrosion inhibitor for use in water jet cutting operations. **CM-1004** quenches and cools surfaces and keeps nozzles clean and free from build-ups. **CM-1004** protects machinery components and processed parts from corrosion, and imparts temporary rust protection onto parts for indoor storage. **CM-1004** does not contain oil, solvents, wax, nitrites, silicones, or heavy metals and is non-flammable.

The chemistry of **CM-1004** provides a semi-dry protective film that will not interfere with further machining and welding operations. **CM-1004** is also designed to prevent bacteria growth and Monday morning odors.

BENEFITS

- Indoor Rust Protection
- Concentrated
- Non-Foaming
- Oil-Free

PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate	Clear Light Yellow Liquid
Appearance, 5% Dilution	Clear Liquid
Specific Gravity	1.024
Pounds per Gallon	8.6
pH, 5% dilution	10.7 +/- 0.4

USE DIRECTIONS

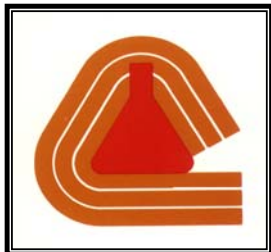
Use **CM-1004** at a 4% to 10% concentration by volume. Actual use concentration will depend on corrosion resistance requirements for your work pieces and jet cutting equipment. It is recommended that your system be drained, cleaned and recharged every 6 months.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1004 is available in 55 gallon drums and 330 gallon totes - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1004-AL

WATER JET CUTTER MULTI-METAL CORROSION INHIBITOR

PRODUCT DESCRIPTION

CM-1004-AL is an environmentally friendly water based corrosion inhibitor for use in water jet cutting operations. **CM-1004-AL** quenches and cools surfaces and keeps nozzles clean and free from build-ups. **CM-1004-AL** protects machinery components and processed parts from corrosion, and imparts temporary rust protection onto parts for indoor storage. **CM-1004-AL** does not contain oil, solvents, wax, nitrites, silicones, or heavy metals and is non-flammable. **CM-1004-AL** is specially designed to operate at a lower alkalinity level than CM-1004 allowing for safe processing of aluminum.

The chemistry of **CM-1004-AL** provides a semi-dry protective film that will not interfere with further machining and welding operations. **CM-1004-AL** is also designed to prevent bacteria growth and Monday morning odors.

BENEFITS

- Indoor Rust Protection
- Concentrated
- Non-Foaming
- Oil-Free

PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate	Clear Light Yellow Liquid
Appearance, 5% Dilution	Clear Liquid
Specific Gravity	1.025
Pounds per Gallon	8.7
pH, 5% dilution	9.8 +/- 0.4

USE DIRECTIONS

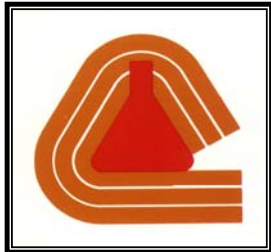
Use **CM-1004-AL** at a 4% to 10% concentration by volume. Actual use concentration will depend on corrosion resistance requirements for your work pieces and jet cutting equipment. It is recommended that your system be drained, cleaned and recharged every 6 months.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1004-AL is available in 55 gallon drums and 330 gallon totes - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1014 & CM-1021 **WATER TABLE DYES**

PRODUCT DESCRIPTION

CM-1014 & CM-1021 will effectively filter visible, infrared and ultraviolet light in water table applications. The unique light absorbent properties will allow the operator to see the work piece be cut while not being fully exposed to the glare. **CM-1014 & CM-1021** are stable, non-flammable, powdered dyes that easily dissolve in the water table bath. The solution should be regenerated as needed to maintain desired depth of color. All safety equipment should be worn in accordance with O.S.H.A. regulations and manufacturers specifications.

BENEFITS

- Concentrated powdered form
- **CM-1014 = Dark Green**
- **CM-1021 = Black**
- Not Regulated by DOT

PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate Dark Powder

USE DIRECTIONS

1 Pound of **CM-1014** to 500 gallons water
1 oz of **CM-1014** to 31.25 gallons water

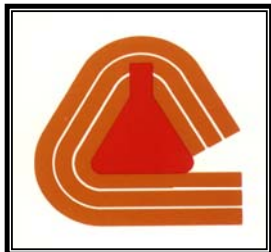
To mix, fill a five gallon pail with water, add the appropriate amount of **CM-1014** to the water and stir, add the pail to the table and agitate the table water. Repeat process until table achieves the desired shade level. It is recommended that the dye be flushed from the table on an annual basis.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1014 & CM-1021 are available in 1 pound increments with a 2 lbs minimum - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1204 WELD ANTI-SPATTER

PRODUCT DESCRIPTION

CM-1204 is formulated to prevent weld spatter from adhering to metal surfaces by reducing the surface tension on the metal surface, allowing for total and uniform wetting, and imparting a water soluble protective coating. **CM-1204** will provide up to 4 weeks indoor storage corrosion protection.

FEATURES

- Eliminates need for wire brushing, sanding and grinding to remove weld spatter
- Reduces labor cleanup time after welding
- Easy application
- Prevents corrosion of work piece
- Operator safe - contains no petroleum and is non-flammable
- Environmentally safe liquid

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pale Yellow
Odor	None
Specific Gravity	1.040
pH	9.50
pH (10%)	9.30

USE DIRECTIONS

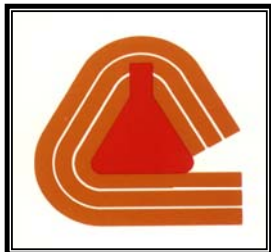
CM-1204 is intended for use at a concentration of 10% to 15% with water. Apply **CM-1204** to metal surface around weld area by dipping, spraying or by brushing. Parts that have been treated with **CM-1204** and stored can be misted with **CM-1204** solution prior to welding for extra protection against weld spatter.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1204 is available in 5 gallon pails, 55 gallon drums, and 330 gallon totes - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-1205-B WELD ANTI SPATTER

PRODUCT DESCRIPTION

CM-1205-B is a high performance weld spatter release agent and corrosion inhibitor for ferrous and non ferrous metals. **CM-1205-B** uniformly reduces the surface tension and wets the area around the weld to prevent weld spatter from burning into and adhering to the metals surface. Weld spatter will fall away from the work piece or can be easily brushed away after welding. **CM-1205-B** will provide short term indoor corrosion protection to areas where applied. **CM-1205-B** contains no solvents, petroleum or hydrocarbon based materials.

FEATURES

- Eliminates need for wire brushing, sanding and grinding to remove weld spatter
- Reduces labor clean up time after welding
- Prevents corrosion of work piece
- Prevents weld spatter from adhering and burning onto welding equipment
- Operator safe. Contains no petroleum and is non-flammable
- Environmentally safe liquid

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear Light Amber Liquid
Flash Point:	Non Flammable
pH:	9.2
Specific Gravity:	1.005

USE DIRECTIONS

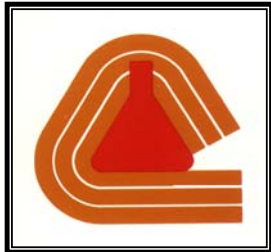
CM-1205-B comes ready to use and can be conveniently applied by spray, brush or rag wipe. Apply **CM-1205-B** around area to be welded and weld nozzle tip prior to welding. **CM-1205-B** is economically packaged in 55 gallon drums and 5 gallon pails for easy transfer to spray bottles or buckets for application.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-1204 is available in 5 gallon pails, 55 gallon drums, and 330 gallon totes - FOB our docks in Cleveland, Ohio.



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TECHNICAL DATA SHEET

CM-33 WATER TABLE ANTI-FREEZE

PRODUCT DESCRIPTION

CM-33 is designed to lower the temperature at which fluid in a water table cutting operation will freeze. **CM-33** will not adversely affect the water table, work piece or cutting operation nor will it interfere with any corrosion inhibitor or biocide added to the water table for increased protection. **CM-33** will lower freeze temperatures progressively as the use concentration is increased.

CM-33 Concentration	Freeze point
15%	21°F
20%	18°F
30%	10°F

USE DIRECTIONS

CM-33 concentration values are based on total tank volume. Add CM-33 Concentrate directly to water table and agitate or circulate water to allow adequate dispersion throughout entire water table. Care should be taken when handling CM-33 and all other chemicals to prevent accidental spills and prolonged contact with skin.

SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.

PACKAGING

CM-33 is available in 5 gallon pails, 55 gallon drums, and 330 gallon totes - FOB our docks in Cleveland, Ohio.

Water Table Corrosion Inhibitors

CHARGING PROCEDURE

- 1) Drain water from table and dispose of in accordance with Federal, State, and Local Waste Disposal Regulations.
- 2) Remove all sludge from table.
- 3) Power wash all remaining loose sludge from table.
- 4) Fill table 3/4 full with water.
- 5) Add appropriate amount of Corrosion Inhibitor to table.
- 6) Agitate solution to mix chemical.
- 7) Fill table to operational level with water.
- 8) Check pH or concentration level and record.

Note: This process is intended for use with **Chemical Methods** Water Table Corrosion Inhibitors.

TABLE VOLUME CALCULATOR

Measurements in Feet:

Table Length: _____ feet x Table Width: _____ feet x Table Depth: _____ feet = _____ ft³

Cubic Feet multiplied by 7.48 = Volume of Tank in Gallons

Measurements in Inches:

Table Length: _____ inches x Table Width: _____ inches x Table Depth: _____ inches = _____ in³

Cubic Inches Divided by 231 = Volume of Tank in Gallons

Volume	Chemical
100	5
200	10
300	15
400	20
500	25
600	30
700	35
800	40

Volume	Chemical
900	45
1000	50
1100	55
1200	60
1300	65
1400	70
1500	75
1600	80

Volume	Chemical
1700	85
1800	90
1900	95
2000	100
2500	125
3000	150
3500	175
4000	200

Volume	Chemical
4500	225
5000	250
5500	275
6000	300
6500	325
7000	350
7500	375
8000	400

