

LASER QUENCH

Chemicals for Cutting Tables



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

(216) 476-8400

Cutting Table Product Line



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



October 20, 2023 – Version 3.3

Cutting Table Corrosion Inhibitors

Cutting table corrosion inhibitors are designed to prevent corrosion of the cutting equipment and impart rust protection to the work pieces in metal cutting or fabrication operations. Operations such as plasma torch, oxy-acetylene, and MAPP gas cutting operations that utilize water tables need treatments to keep rust and bacterial growth from forming and fouling the operation. Proper maintenance of these fluids can greatly extend the life of the bath and improve cutting quality.

Laser Quench is non-flammable, non-hazardous, non-toxic, and non-foaming inhibitor for water tables. **Laser Quench Green** is fluorescent green dyed version. **Laser Quench Dark Green** is an easy-to-use combination of **Laser Quench** and UV absorbing dye.

Laser Quench Plus Green 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. **Laser Quench Plus** is un-dyed version. **Laser Quench Plus Powder** is an economical powdered version for use in very large water tables (usually 10,000 gallons or more). These products will attack aluminum with prolonged exposure.

Laser Quench AL Green is a unique product that affords corrosion protection to ferrous metals (both parts and equipment) without showing aggression towards aluminum substrates. Aluminum metal is “etched” by alkaline chemicals that results in generation of hydrogen gas. This gas can then collect in pockets under the work creating potentially hazardous flammable conditions. **Laser Quench AL** is the un-dyed version.



Which Laser Quench Product is right for you?

	FLUORESCENT GREEN DYE	STRENGTH INDICATOR	ALUMINUM/ ZINC SAFE	UV PROTECTION	LIQUID
Laser Quench					✓
Laser Quench Green	✓	✓			✓
Laser Quench Dark Green				✓	✓
Laser Quench+					✓
Laser Quench+ Green	✓	✓			✓
Laser Quench+ Powder					
Laser Quench Anti-Spatter					
Laser Quench Antifreeze					
Laser Quench AL			✓		✓
Laser Quench AL Green	✓	✓	✓		✓



Other Items

Our **Laser Quench Anti-Spatter** formulation incorporates 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. Product is applied by spray, soak or simply brushed on. **Laser Quench Antifreeze** reduces the temperature at which the fluid in a water table will freeze. It will not interfere with the cutting operation or subsequent forming or finishing operations.

Price Sheet

Product	Package	Minimum Order	Price
Laser Quench	55 GL Drum	1 Drum	\$10.49 per gallon
	5 GL Pail	9 Pails	\$25.99 per gallon
Laser Quench Green	55 GL Drum	1 Drum	\$10.89 per gallon
	5 GL Pail	1 Pail	\$37.09 per gallon
	5 GL Pail	9 Pails	\$26.49 per gallon
Laser Quench Plus	55 GL Drum	1 Drum	\$11.34 per gallon
	5 GL Pail	9 Pails	\$28.49 per gallon
Laser Quench Plus Green	55 GL Drum	1 Drum	\$11.74 per gallon
	5 GL Pail	1 Pail	\$40.59 per gallon
	5 GL Pail	9 Pails	\$28.99 per gallon
Laser Quench Plus Powder	450 LB Drum	1 Drum	\$6.75 per pound
	50 LB Box	9 Boxes	\$7.99 per pound



Laser Quench AI	55 GL Drum 5 GL Pail	1 Drum 9 Pails	\$16.89 per gallon \$34.10 per gallon
Laser Quench AI Green	55 GL Drum 5 GL Pail	1 Drum 9 Pails	\$17.75 per gallon \$34.60 per gallon
Laser Quench Dark Green	55 GL Drum	1 Drum	\$13.45 per gallon
CM-1014 Green Dye	Canister	2 Pounds	\$101.24 per pound
CM-1021 Black Dye	Canister	2 Pounds	\$101.24 per pound
Laser Quench Anti Spatter	55 GL Drum 5 GL Pail	1 Drum 1 Pail	\$12.36 per gallon \$24.99 per gallon
Laser Quench Anti-Freeze	55 GL Drum	1 Drum	\$45.45 per gallon

F.O.B.:

Our Dock; Cleveland, Ohio

Terms:

Net 30 Days

CONTACT US:

- Dan Gaba – Product Specialist / Chemist – dgaba@chemicalmethods.com
 - (216) 476-8400 x101
 - Cell (440) 334-4244
- Denise Latona – Orders & Billing – dlatona@chemicalmethods.com
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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!

Laser Quench Plus & Laser Quench Plus Green

PLASMA QUENCH TYPE WATER TABLE CORROSION INHIBITOR

LASER QUENCH PLUS 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 **LASER QUENCH PLUS** inhibits corrosion and eliminates foul odors in stagnant or agitated water tables. **LASER QUENCH PLUS** used at a concentration of 5%, provides up to eight weeks indoor corrosion protection for all ferrous and non-ferrous metals. **LASER QUENCH PLUS** 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. **LASER QUENCH PLUS** contains no flammable solvents, oils, waxes, silicates, or amines. **LASER QUENCH PLUS** was designed with the objective of extending the life and integrity of the cutting table and work piece. **LASER QUENCH PLUS GREEN** is the fluorescent green dyed version of this product.

FEATURES & BENEFITS

- Provides corrosion protection for in-plant storage
- Prevents rancidity and foul odors

Developing Innovative Solutions For Industry

2853 Westway Drive • Brunswick, OH 44212 • 216-476-8400 • Fax 216-476-1231



- Industry standard chemistry for application
- Free titration kit with drum purchase
- Colorless at dilution (or fluorescent green)

PHYSICAL AND CHEMICAL PROPERTIES

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

USE DIRECTIONS

LASER QUENCH PLUS 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 and consideration made to lower tank volume below cutting surface. It is recommended the water table be drained and recharged with a fresh **LASER QUENCH PLUS** 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 **LASER QUENCH PLUS** 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, HANDLING & PACKAGING

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

Laser Quench Plus Powder

PLASMA QUENCH WATER TABLE CORROSION INHIBITOR POWDER

LASER QUENCH PLUS POWDER 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 **LASER QUENCH PLUS POWDER** inhibits corrosion and foul odors in stagnant or agitated water tables. **LASER QUENCH PLUS POWDER** 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.

LASER QUENCH PLUS POWDER 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. **LASER QUENCH PLUS POWDER** contains no flammable solvents, oils, waxes, or amines.

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

LASER QUENCH PLUS POWDER 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 **LASER QUENCH PLUS POWDER** 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 **LASER QUENCH PLUS POWDER**. 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

LASER QUENCH PLUS POWDER is available in 450 pound drums - FOB our docks in Cleveland, Ohio.

Laser Quench & Laser Quench Green

WATER TABLE CORROSION INHIBITOR

LASER QUENCH 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. **LASER QUENCH** provides continuous corrosion protection for water tables and imparts 4 to 6 weeks of indoor storage corrosion protection for your work piece. The unique chemistry of **LASER QUENCH** provides a semi-dry protective film that will not interfere with further machining, welding, or finishing operations. **LASER QUENCH** limits bacteria growth and the generation of foul Monday morning odors. **LASER QUENCH** does not contain flammable solvents, oils, biocides, nitrites, silicates, silicones, or waxes. **LASER QUENCH DARK GREEN** is a dark green dyed version of this product. **LASER QUENCH GREEN** is a yellow-green dyed version.

BENEFITS

- Non-toxic; non-hazardous; non-flammable; non-foaming
- Free titration kit



- Prevents obnoxious bath odors
- Concentrated formulation
- Not Regulated by DOT

PHYSICAL AND CHEMICAL PROPERTIES

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

USE DIRECTIONS

Use **LASER QUENCH** 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

LASER QUENCH is available 5 gallon pails, 55 gallon drums, and 330 gallon totes FOB our docks in Cleveland, Ohio.

Laser Quench AL & Laser Quench AL Green

MULTI-METAL CORROSION INHIBITOR

LASER QUENCH AL 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. **LASER QUENCH AL** is specifically formulated to not attack aluminum alloys or etch aluminum surfaces. **LASER QUENCH AL** provides continuous corrosion protection for water tables and imparts 4 to 6 weeks of indoor storage corrosion protection for your work piece. The unique chemistry of **LASER QUENCH AL** provides a semi-dry protective film that will not interfere with further machining, welding, or finishing operations. **LASER QUENCH AL** limits bacteria growth and the generation of foul Monday morning odors. **LASER QUENCH AL** does not contain flammable solvents, oils, biocides, nitrites, silicates, silicones, or waxes. **LASER QUENCH AL GREEN** is a yellow-green dyed version.

BENEFITS



- Non-toxic; non-hazardous; non-flammable
- Free titration kit
- Prevents obnoxious bath odors
- Concentrated formulation
- Not Regulated by DOT

PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate	Clear Liquid (or Amber Liquid)
Appearance, 5% Dilution	Clear Liquid (or Yellow Green Liquid)
Specific Gravity	1.004
Pounds per Gallon	8.5
pH, 5% dilution	10.2 +/- 0.4

USE DIRECTIONS

Use **LASER QUENCH 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

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

CM-1014 & CM-1021

WATER TABLE DYES

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.

LASER QUENCH ANTI-SPATTER

WELD ANTI SPATTER

LASER QUENCH ANTI-SPATTER is a high performance weld spatter release agent and corrosion inhibitor for ferrous and non ferrous metals. **LASER QUENCH ANTI-SPATTER** 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. **LASER QUENCH ANTI-SPATTER** will provide short term indoor corrosion protection to areas where applied. **LASER QUENCH ANTI-SPATTER** 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

LASER QUENCH ANTI-SPATTER comes ready to use and can be conveniently applied by spray, brush or rag wipe. Apply **LASER QUENCH ANTI-SPATTER** around area to be welded and weld nozzle tip prior to welding. **LASER QUENCH ANTI-SPATTER** 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.

LASER QUENCH ANTIFREEZE

WATER TABLE ANTI-FREEZE

PRODUCT DESCRIPTION

LASER QUENCH ANTIFREEZE is designed to lower the temperature at which fluid in a water table cutting operation will freeze. **LASER QUENCH ANTIFREEZE** 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. **LASER QUENCH ANTIFREEZE** will lower freeze temperatures progressively as the use concentration is increased.



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

USE DIRECTIONS

LASER QUENCH ANTIFREEZE concentration values are based on total tank volume. Add LASER QUENCH ANTIFREEZE Concentrate directly to water table and agitate or circulate water to allow adequate dispersion throughout entire water table. Care should be taken when handling LASER QUENCH ANTIFREEZE 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

LASER QUENCH ANTIFREEZE is available in 5 gallon pails, 55 gallon drums, and 330 gallon totes - FOB our docks in Cleveland, Ohio.

Laser Quench 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