

Shine A-Cu



Technical Dossier

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S H E P A R D B R O S . I N C .

SHINE A-CU

Cleaning Acid for Copper

PRODUCT DESCRIPTION

SHINE A-CU is a low-foaming liquid detergent formulated for circulation and surface cleaning of all stainless steel dairy and food processing equipment.

SHINE A-CU shows particular utility with yellow metals such as copper and brass under hard water conditions.

SHINE A-CU may also offer utility as a passivating acid.

PROPERTIES AND BENEFITS

- A blended, low-foaming formulation.
- Biodegradable and free rinsing.
- Restores original oxide finish to stainless steel equipment.
- Works well in all water conditions.
- Unlike most acid descalers, **SHINE A-CU** exhibits enhanced stability under hard water conditions with reduced potential for precipitation or scale formation attributable to calcium salts.
- Non-corrosive to stainless steel and yellow metals at recommended use dilutions.
- Maintains effectiveness at high temperatures.
- Concentrated to provide optimal use/cost performance.
- Penetrates and dissolves milkstone, mineral and hard water scales.
- Ideal for hot or cold spray circulation cleaning.
- Neutralizes and removes tough baked-on soils.

DIRECTIONS

SHINE A-CU is commonly used in concentrations of 0.5 fl-oz/gal up to 3 fl-oz/gal. A potable water rinse is required.

Consult your Shepard Bros., Inc. representative for specific use instructions and recommended dispensing equipment.

(Rev. 07/18)

The technical information and use suggestions herein are presented in good faith and are believed to be reliable. They do not constitute a part of our terms and conditions of sale unless specifically incorporated in our Order Acknowledgement. Nothing herein shall be deemed to constitute a warranty, expressed or implied, that said information or data are correct, or that the product described is merchantable or fit for a particular purpose, or that said information, data or product can be used without infringing patents of a third party. The purchaser must determine individually, by preliminary tests or otherwise, the suitability of this product for the intended purpose.

SAFE HANDLING

A Safety Data Sheet containing detailed information regarding the properties and safe handling of **SHINE A-CU** is available on request and should be reviewed prior to using this product.

(Rev. 07/18)

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Shepard Bros., Inc.

503 S. Cypress St. La Habra, CA 90631

(800) 645-3594

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: ADACU
Product Name: Shine A-CU
Company Name: Shepard Bros. Inc.
503 S. Cypress St.
La Habra, CA 90631
Phone Number: +1 (562)697-1366
Web site address: www.shepardbros.com
Emergency Contact: CHEMTREC +1 (800)424-9300

2. HAZARDS IDENTIFICATION

Skin Corrosion/Irritation, Category 1B
Corrosive To Metals, Category 1
Serious Eye Damage/Eye Irritation, Category 1



GHS Signal Word: **Danger**
GHS Hazard Phrases: H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
GHS Precautionary Phrases: P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases: P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment see ... on this label.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
GHS Storage and Disposal Phrases: P405 - Store locked up.
P501 - Dispose of contents and containers in accordance with local, regional, national, and international regulations.
Other Hazards: Harmful to aquatic life with long lasting effects.
Potential Health Effects (Acute and Chronic): Hazards not otherwise classified (HNOC) or not covered by GHS -none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
7664-38-2	Phosphoric acid	<20.0 %
75-75-2	Methanesulfonic acid	< 8.0 %
6419-19-8	Aminotri (methylenephosphonic acid)	< 2.0 %
NA	(Trade Secret)	<=1.0 %

4. FIRST AID MEASURES

Emergency and First Aid Procedures:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
In Case of Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In Case of Skin Contact:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In Case of Eye Contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
In Case of Ingestion:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Signs and Symptoms Of Exposure:	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 The most important known symptoms and effects are described in the labelling (see section 2 .2) and/or in section 11
Indication of any immediate medical attention and special treatment needed:	No data available.

5. FIRE FIGHTING MEASURES

Flash Pt:	No data. Method Used: Estimate
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
Fire Fighting Instructions:	Wear self contained breathing apparatus for fire fighting if necessary. Further information. No data available.
Flammable Properties and Hazards:	Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine. Carbon oxides, Nature of decomposition products not known. nitrogen oxides (NOx).
Hazardous Combustion Products:	No data available.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8. Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
Environmental Precautions:	Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.
Steps To Be Taken In Case Material Is Released Or Spilled:	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Pick up and arrange disposal without creating dust. Sweep up and shovel.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	Avoid inhalation of vapor or mist. For precautions see section 2. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Precautions To Be Taken in Storing:	Keep container tightly closed in a dry and well-ventilated place. Contact with weak acids will decompose the material; Heat sensitive. Storage class (TRGS 510): Combustible, corrosive hazardous materials Hygroscopic. Store under inert gas.
Other Precautions:	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated. Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7664-38-2	Phosphoric acid	PEL: 1 mg/m3	TLV: 1 mg/m3 STEL: 3 mg/m3	No data.
75-75-2	Methanesulfonic acid	No data.	No data.	No data.
6419-19-8	Aminotri (methylene phosphonic acid)	No data.	No data.	No data.
NA	(Trade Secret)	No data.	No data.	No data.

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
7664-38-2	Phosphoric acid	NIOSH	TWA: 1 mg/m3 STEL: 3 mg/m3	

Respiratory Equipment (Specify Type):	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.
Eye Protection:	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side-shields conforming to EN166.
Protective Gloves:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact. Material: Nitrile rubber Minimum layer thickness: 0.11 mm. If used in solution, or mixed with other substances, and under conditions which differ



SAFETY DATA SHEET

Shine A-CU

from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Material: Nature latex/chloroprene. Minimum layer thickness: 0.6 mm Break through time: ? min.

Other Protective Clothing:	Complete suit protecting against chemicals. Impervious clothing.
Engineering Controls (Ventilation etc.):	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Environmental Exposure Controls:	Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Solid
Appearance and Odor:	liquid. No data available. Odor Threshold: Color:		
pH:	< 2.0		
Melting Point:	40.00 C - 215.00 C		
Boiling Point:	158.00 C - 167.00 C		
Flash Pt:	No data. Method Used: Estimate		
Evaporation Rate:	NA		
Flammability (solid, gas):	No data available.		
Explosive Limits:	LEL: No data.	UEL: No data.	
Vapor Pressure (vs. Air or mm Hg):	NA		
Vapor Density (vs. Air = 1):	NA		
Specific Gravity (Water = 1):	NA		
Density:	1.605 G/CM3		
Bulk density:	NA		
Solubility in Water:	NA		
Saturated Vapor Concentration:	NA		
Octanol/Water Partition Coefficient:	No data.		
Percent Volatile:	NA		
VOC / Volume:	NA		
HAP / Volume:	NA		
Autoignition Pt:	No data.		
Decomposition Temperature:	NA		
Viscosity:	NA		
Particle Size:	NA		
Heat Value:	NA		
Corrosion Rate:	NA		

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	No data available. Heat.
Incompatibility - Materials To Avoid:	Strong bases, Powdered metals, amines, Strong reducing agents, Strong oxidizing agents. Bases.
Hazardous Decomposition or Byproducts:	No data available. In the event of fire: see section 5.
Possibility of Hazardous Reactions:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information:	<p>Acute toxicity: No data available. Inhalation: Dermal. Germ cell mutagenicity: Reproductive toxicity: Aspiration hazard: Hamster ovary. Result: negative. (OECD Test Guideline 474 Mouse. male. Reproductive toxicity - rat - Oral. male and female. No adverse effect has been observed in chronic toxicity tests. Cell Type: lymphocyte.</p>
Irritation or Corrosion:	<p>Skin corrosion/irritation. No data available. Serious eye damage/eye irritation no data available. Skin: Rabbit. Result: Corrosive to eyes Serious eye damage/eye irritation Eyes -Rabbit. Eyes. Risk of serious damage to eyes. Irritating to eyes.</p>
Sensitization:	<p>No data available. Buehler Test: Species: Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) Maximisation Test.</p>
Chronic Toxicological Effects:	<p>Specific target organ toxicity -single exposure (Globally Harmonized System) No data available. Specific target organ toxicity -repeated exposure: no data available. Specific target organ toxicity - single exposure:</p>
Carcinogenicity/Other Information:	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. ACGIH:</p>
Carcinogenicity:	<p>NTP? No IARC Monographs? No OSHA Regulated? No</p>

12. ECOLOGICAL INFORMATION

General Ecological Information: No data available.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Persistence and Degradability: No data available. Biodegradability - aerobic: Chemical oxygen demand - Exposure time: 28 Result: 90 -100 % - Readily biodegradable. Biodegradability: aerobic -Exposure time 28. Result: 23 % -Not readily biodegradable.

(OECD Test Guideline 301D)

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other adverse effects: No data available. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Product.
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Phosphoric acid solution.
DOT Hazard Class: 8 CORROSIVE
UN/NA Number: UN1805 **Packing Group:** III



AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Solids containing corrosive liquid, n.o.s.
UN Number: 1805 **Packing Group:** III
Hazard Class: 8 - CORROSIVE

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7664-38-2	Phosphoric acid	No	Yes 5000 LB	No
75-75-2	Methanesulfonic acid	No	No	No
6419-19-8	Aminotri (methylenephosphonic acid)	No	No	No
NA	(Trade Secret)	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explosive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Acute toxicity (any route of exposure)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Flammable (gases, aerosols, liquid, or solid)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Skin Corrosion or Irritation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Oxidizer (liquid, solid or gas)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Serious eye damage or eye irritation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Self-reactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Respiratory or Skin Sensitization
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Pyrophoric (liquid or solid)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Germ cell mutagenicity

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Pyrophoric gas | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Carcinogenicity |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Self-heating | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Reproductive toxicity |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Organic peroxide | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Specific target organ toxicity (single or repeated exposure) |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Corrosive to metal | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Aspiration Hazard |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Gas under pressure (compressed gas) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Simple Asphyxiant |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | In contact with water emits flammable gas | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | (Health) Hazard Not Otherwise Classified (HNOC) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Combustible Dust | | |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | (Physical) Hazard Not Otherwise Classified (HNOC) | | |

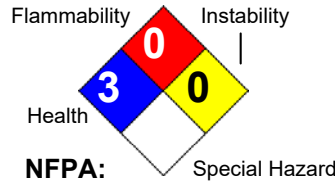
CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7664-38-2	Phosphoric acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC: Cat. IIb, Title 8
75-75-2	Methanesulfonic acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No
6419-19-8	Aminotri (methylenephosphonic acid)	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No
NA	(Trade Secret)	TSCA: No; CA PROP.65: No; CA TAC, Title 8: No

16. OTHER INFORMATION

Revision Date: 06/10/2020

Preparer Name: Jose Arias

Hazard Rating System:



Additional Information About This Product: No data available.

This Product:

Company Policy or Disclaimer:

Information presented herein is believed to be accurate and reliable to the best of our knowledge. However, we make no warranty or merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process. Users should make their own investigations to determine the suitability of the information for their particular purposes.

SHINE A-CU

(Formerly Acid A-CU)

DANGER

May be corrosive to metals
Causes serious eye damage
Causes severe skin burns and eye damage

SAME
TRUSTED
FORMULA



Precautionary Statements: Do not breathe mist/vapors/spray. Wear protective gloves, protective clothing, eye protection, and face protection. Wash hands thoroughly after handling. Keep only in original container.

Response Phrases:

IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or a doctor.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
SPECIFIC TREATMENT: See Section 4 of the SDS to reference supplemental first aid instruction if immediate measures are required.

Absorb spillage to prevent material damage.

Storage/Disposal: Store locked up. Dispose of contents and containers in accordance with local, regional, national, and international regulations.

Supplemental Information: This product may be fatal if swallowed in large amounts. Take proper precautions, especially when using this product in an enclosed or semi-enclosed area.

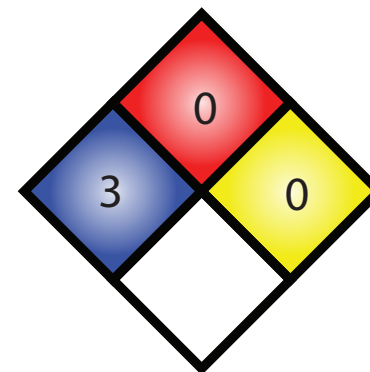
KEEP OUT OF REACH OF CHILDREN.



SHEPARD BROS., INC.
503 S. CYPRESS ST.
La Habra, CA 90631 • (562) 697-1366

CONTAINS: PHOSPHORIC ACID, DO NOT MIX WITH CHLORINATED COMPOUNDS, DETERGENTS, OR SANITIZERS.

Contact your Shepard Bros., Inc. representative for more specific use instructions and recommended dispensing equipment.



PROPER SHIPPING NAME:

**UN1805,
PHOSPHORIC ACID SOLUTION, 8, PGIII**

PRODUCT ID:

BATCH NO.:

NET CONTENTS:

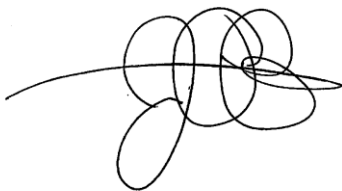
January 1, 2020

Based on current U.S. Food and Drug Administration Guidelines, this Letter of Guarantee certifies that the Shepard Bros., Inc. product, **Shine A-CU**, is safe and suitable as an acid cleaner for use in all departments of establishments processing food for human or animal consumption.

When used according to the product label directions and in accordance with Good Manufacturing Practice this product will have no deleterious effects on the foods being processed.

This product must be used, handled and stored in a manner that will not adulterate food products. Before using this compound, food products and packaging materials must be removed from the room or carefully protected. After using this compound, surfaces in the area must be thoroughly rinsed with potable water. This product must always be used according to applicable label directions.

Sincerely,



Jose Arias
Director of Compliance & Regulatory Affairs
Shepard Bros., Inc.



SHEPARD BROS.

Shepard Bros., Inc.
503 S. Cypress St.
La Habra, CA 90631
(562) 697-1366

Shine A-Cu
Acidity Test Kit
SBRTK1000-Z

1. Rinse bottle 3 times with solution to be tested.
2. Fill bottle to the 5 or 10 mL mark with sample.
3. Add 3 drops of Phenolphthalein indicator (PH1705). Swirl to mix.
4. Add 1.0 N Sodium Hydroxide (SH6255) drop-wise while swirling until the sample color turns pink. Count the number of drops. Hold bottle vertically.

If using 5 mL sample multiply:

number of drops x 0.04 = to obtain % acidity as Phosphoric acid (by weight)

number of drops x 0.167 = to obtain % product in solution (by volume)

number of drops x 0.25 = to obtain fl-oz product/gallon

number of drops x 1670 = to obtain ppm product in solution (by volume)

Example: 1.0 fl-oz/ gal = 4 drops

2.0 fl-oz/ gal = 8 drops

1% product (by vol) = 6 drops

If using 10 mL sample multiply:

number of drops x 0.02 = to obtain % acidity as Phosphoric acid (by weight)

number of drops x 0.091 = to obtain % product in solution (by volume)

number of drops x 0.125 = to obtain fl-oz product/gallon

number of drops x 910 = to obtain ppm product in solution (by volume)

Example: 1.0 fl-oz/ gal = 8 drops

1.0 fl-oz/ 2 gal = 4 drops

1% product (by vol) = 11 drops

NOTE: For accuracy and consistency hold the dropper bottle in a vertical position during the titration.

Rev 05/2020