

Shine 500



Technical Dossier

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

Shine 500 Cleaning Acid

PRODUCT DESCRIPTION

SHINE 500 is a low-foaming liquid detergent formulated for circulation and surface cleaning of all stainless steel dairy and food processing equipment.

Shine 500 contains inorganic oxidizing acids which enhance 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
- Non-corrosive to stainless steel 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
- Offers utility as passivating acid
- Not compatible with galvanized steel, painted aluminum and alloys

DIRECTIONS

Flush the system to be cleaned with water. Depending on the severity of the cleanup application Shine 500 is commonly used in concentrations of 2 fl. oz/gal up to 8 fl. oz/gal.

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

SAFE HANDLING

A Safety Data Sheet containing detailed information regarding the properties and safe handling of **Shine 500** is available on request and should be carefully reviewed prior to using this product.

(Rev. 01/2020)

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.

Shepard Bros., Inc. ▪ 503 S. Cypress St. La Habra, CA 90631 ▪ (800) 645-3594 ▪ www.shepardbros.com

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: SH500
Product Name: Shine 500
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
Product Category: Acid Cleaner

2. HAZARDS IDENTIFICATION

Oxidizing Liquids, Category 3

Skin Corrosion/Irritation, Category 1A



GHS Signal Word: Danger

GHS Hazard Phrases: H272 - May intensify fire; oxidizer.
H314 - Causes severe skin burns and eye damage.

GHS Precaution Phrases: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220 - Keep away from combustible materials.
P221 - Take any precaution to avoid mixing with combustibles/...
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.

GHS Response Phrases: P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P315 - Get immediate medical advice/attention.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P315 - Get immediate medical advice/attention.
P302+352 - IF ON SKIN: Wash with plenty of soap and water. P315 - Get immediate medical advice/attention.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P315 - Get immediate medical advice/attention.
P321 - Specific treatment see Section 4 reference to supplemental first aid instruction - if immediate measures are required.

GHS Storage and Disposal Phrases: P501 - Dispose of contents/containers in accordance with local / regional / national / international regulations.

Hazard Rating System:





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Potential Health Effects (Acute and Chronic):

Inhalation: Vapors and mists may severely damage contacted tissue and produce scarring. Exposure to high concentrations may cause pulmonary edema and pneumonia.

Skin Contact: Direct contact may result in redness, swelling, acid burns, and severe skin damage.

Eye Contact: May cause rapid tissue damage, which can lead to permanent eye damage.

Ingestion: May cause severe burning of the mouth, throat, and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS # | Hazardous Components (Chemical Name) | Concentration |
|-----------|--------------------------------------|---------------|
| 7697-37-2 | Nitric acid | 25.0 - 35.0 % |
| 7664-38-2 | Phosphoric acid | 5.00 - 10.0 % |

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask. Get medical attention immediately.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Gently wash with plenty of soap and water. Wash contaminated clothing separately before reuse. Get medical attention immediately.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do after 5 minutes and continue rinsing for an additional 15 minutes. Get medical attention immediately.

In Case of Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Note to Physician: Treat symptomatically and supportively. Show this safety data sheet to the doctor in attendance.

5. FIRE FIGHTING MEASURES

Flash Pt: NA Method Used: Not Applicable

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: NA

Suitable Extinguishing Media: Foam, CO2, water fog, sand/earth.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved (or equivalent), and full protective gear.

Flammable Properties and Hazards: High temperatures and flames may produce: toxic. oxides of nitrogen, oxides of phosphorus, Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.



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6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures: Use proper personal protective equipment as indicated in Section 8.

Environmental Precautions: Do not let product enter drains, sewers, watersheds or water systems.

Steps To Be Taken In Case Material Is Released Or Spilled: Spills/Leaks: Provide ventilation. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Neutralize with sodium carbonate or sodium bicarbonate. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Use as directed. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

Precautions To Be Taken in Storing: Store in cool place. Do not store in direct sunlight. Keep away from heat, sparks and flame. Store in a tightly closed container. Keep container closed when not in use. Protect containers against damage.

Other Precautions: Do not mix with chlorinated product. Handle in accordance with good industrial hygiene and safety practices. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
|-----------|-----------------------|--------------------------|---|--------------|
| 7697-37-2 | Nitric acid | PEL: 1 mg/m ³ | TLV: 1 mg/m ³ STEL: 3 mg/m ³ | No data. |
| 7664-38-2 | Phosphoric acid | PEL: 2 mg/m ³ | TLV: 2 mg/m ³ STEL: 4 mg/m ³ | No data. |

Respiratory Equipment (Specify Type): Avoid breathing vapors and mists. If ventilation is not sufficient to effectively prevent buildup of vapors or mists and the exposure limit is exceeded, use a NIOSH/MSHA approved respirator.

Eye Protection: Wear chemical splash goggles and a full-face shield where there is potential for eye contact.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure. Rubber or neoprene gloves. nitrile gloves.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure. Chemical resistant apron. Rubber or neoprene boots.

Engineering Controls (Ventilation etc.): Ensure adequate ventilation. Local exhaust is suggested for use in enclosed or confined areas. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| Physical States: | [] Gas [X] Liquid [] Solid |
| Appearance and Odor: | Appearance: Reddish. Liquid. Odor: Sharp. pungent odor. |
| Melting Point: | < 32.0 F (0 C) |
| Boiling Point: | > 212 F (100 C) |
| Decomposition Temperature: | NA |
| Autoignition Pt: | NA |
| Flash Pt: | NA Method Used: Not Applicable |
| Explosive Limits: | LEL: No data. UEL: No data. |
| Specific Gravity (Water = 1): | 1.213 |
| Density: | NA |
| Bulk density: | NA |
| Vapor Pressure (vs. Air or mm Hg): | NA |
| Vapor Density (vs. Air = 1): | NA |
| Evaporation Rate: | NA |
| Solubility in Water: | Complete |
| Saturated Vapor Concentration: | NA |
| Viscosity: | NA |
| pH: | ~ 2 |
| Percent Volatile: | NA |
| VOC / Volume: | NA |
| Particle Size: | NA |
| Heat Value: | NA |
| Corrosion Rate: | NA |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity: | High temperatures and flames may produce: toxic. oxides of nitrogen, oxides of phosphorus, Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas. |
| Stability: | Unstable [] Stable [X] |
| Conditions To Avoid - Instability: | High temperatures, Ignition sources, Incompatible materials. |
| Incompatibility - Materials To Avoid: | chlorine or chlorine bleaches, strong alkalis, Mild steel. Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas. |
| Hazardous Decomposition Or Byproducts: | High temperatures and flames may produce: toxic. oxides of nitrogen, oxides of phosphorus. |
| Possibility of Hazardous Reactions: | Will occur [] Will not occur [X] |
| Conditions To Avoid - Hazardous Reactions: | No data available. |

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Epidemiology: No information available.
 Teratogenicity: No information available.
 Reproductive Effects: No information available.
 Mutagenicity: No information available.
 Neurotoxicity: No information available.
 Other Studies: CAS# 7697-37-2:
 Acute toxicity, LC50, Inhalation, Rat, 67.00 ppm (NO2), 4 H.

Other Studies: CAS# 7664-38-2:
 Acute toxicity, LD50, Oral, Rat, 1530 mg/kg
 Acute toxicity, LD50, Skin, Rabbit, 2740 mg/kg
 Acute toxicity, LC50, Inhalation, Rat, 850.0 mg/m3, 1 H.

Irritation or Corrosion: Other Studies: CAS# 7664-38-2:
 Standard Draize Test, Eyes, Species:Rabbit, 119.0 mg.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. ECOLOGICAL INFORMATION

General Ecological Information: Environmental: No information available.
 Physical: No information available.
 Other: Do not empty into drains.

Results of PBT and vPvB assessment: Other Studies: CAS# 7697-37-2:
 LC50, Cockle (Cerastoderma edule), adult(s), 330000 - 1000000 ug/L, 48H, Mortality
 LC50, Starfish (Asterias rubens), adult(s), 100000 - 330000 ug/L, 48H, Mortality.

Other Studies: CAS# 7664-38-2:
 Not reported. Rainbow Trout (Oncorhynchus mykiss), fingerling, 5.190%, 27 W.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Observe all federal, state, and local environmental regulations.
 RCRA P-Series: None listed.
 RCRA U-Series: None listed.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, Phosphoric Acid)

DOT Hazard Class: 8 CORROSIVE

UN/NA Number: UN3264

Packing Group: II





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Shine 500

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) |
|-----------|--------------------------------------|--------------|-------------|--------------|
| 7697-37-2 | Nitric acid | Yes 1000 LB | Yes 1000 LB | Yes |
| 7664-38-2 | Phosphoric acid | No | Yes 5000 LB | No |

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|-----------|--------------------------------------|--|
| 7697-37-2 | Nitric acid | TSCA: Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8 |
| 7664-38-2 | Phosphoric acid | TSCA: Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8 |

16. OTHER INFORMATION

Revision Date: 02/03/2020
Additional Information About This Product: No data available.

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 500

(Formerly Acid #14)

**SAME
TRUSTED
FORMULA**

ACID CLEANER

DANGER

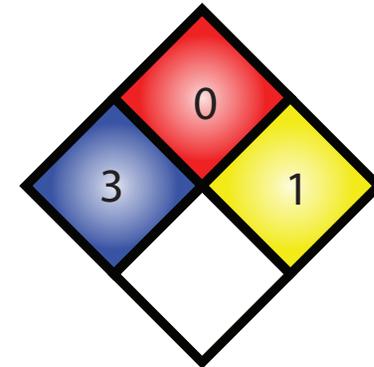
May intensify fire; oxidizer.

Causes severe skin burns and eye damage



CONTAINS: INORGANIC ACIDS. DO NOT MIX WITH CHLORINATED DETERGENTS - WILL CAUSE HAZARDOUS VAPORS.

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



Precautionary Statements: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep away from combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe mist/vapors/spray. Wear protective gloves, protective clothing, eye protection, and face protection. Wash hands thoroughly after handling.

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.

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. Immediately call a POISON CENTER or a doctor.

SPECIFIC TREATMENT: See Section 4 of the SDS to reference supplemental first aid instruction if immediate measures are required.

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

Supplemental Information: This product may be harmful if swallowed. Read safety data sheets for more detailed information.
KEEP OUT OF REACH OF CHILDREN.

PROPER SHIPPING NAME:

UN3264,

CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S. (NITRIC ACID, PHOSPHORIC ACID),
8, PGII

PRODUCT ID:

BATCH NO.:

NET CONTENTS:



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

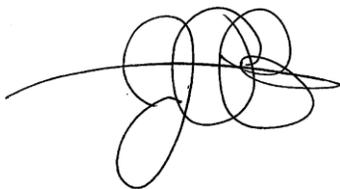
January 1, 2020

Based on current U.S. Food and Drug Administration Guidelines, this Letter of Guarantee certifies that the Shepard Bros., Inc. product, **Shine 500**, 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, all surfaces in the area must be thoroughly rinsed with potable water. This product must always be used according to applicable label directions.

Sincerely,



Director of Compliance & Regulatory Affairs
Shepard Bros., Inc.
503 S. Cypress St.
La Habra, CA 90631
P: (562) 697-1366 X:458
F: (562) 690-6008
jose_arias@shepardbros.com



SHEPARD BROS.

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

Shine 500
Acidity Test Kit
SBRTK1000-Z

1. Rinse bottle 3 times with solution to be tested.
2. Using the syringe, measure 1 or 5 mL of sample to be tested.
3. OPTIONAL: Dilute sample to 30 mL mark with water (For easier endpoint detection).
4. Add 3 drops of Phenolphthalein indicator (PH1605). Swirl to mix.
5. 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 1 mL sample multiply:

number of drops x 0.2 = to obtain % acidity as Phosphoric acid (by weight)

number of drops x 0.26 = to obtain % acidity as nitric acid (by weight)

number of drops x 0.59 = to obtain % product in solution (by volume)

number of drops x 0.77 = to obtain fl-oz product/gallon

number of drops x 5900 = to obtain ppm product in solution (by volume)

Example: 3.0 fl-oz/ gal = 4 drops

6.0 fl-oz/ 2 gal = 8 drops

3% product (by vol) = 5 drops

If using 5 mL sample multiply:

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

number of drops x 0.051 = to obtain % acidity as Nitric acid (by weight)

number of drops x 0.111 = to obtain % product in solution (by volume)

number of drops x 0.143 = to obtain fl-oz product/gallon

number of drops x 1110 = to obtain ppm product in solution (by volume)

Example: 1.0 fl-oz/ gal = 7 drops

2.0 fl-oz/ gal = 14 drops

1% product (by vol) = 9 drops

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



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SHINE 500
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 (PH1605). 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 0.051 = to obtain % acidity as Nitric acid (by weight)

number of drops x 0.111 = to obtain % product in solution (by volume)

number of drops x 0.143 = to obtain fl-oz product/gallon

number of drops x 1110 = to obtain ppm product in solution (by volume)

Example: 1.0 fl-oz/ gal = 7 drops

2.0 fl-oz/ gal = 14 drops

1% product (by vol) = 9 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 0.026 = to obtain % acidity as nitric acid (by weight)

number of drops x 0.059 = to obtain % product in solution (by volume)

number of drops x 0.077 = to obtain fl-oz product/gallon

number of drops x 590 = to obtain ppm product in solution (by volume)

Example: 1.0 fl-oz/ gal = 13 drops

1.0 fl-oz/ 2 gal = 7 drops

1% product (by vol) = 17 drops

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

3.6 % solution Shine 500 (3.8 fl-oz/gal) = 1% as Phosphoric acid (=50 drops when using 10 mL sample)

1.8 % solution Shine 500 (1.9 fl-oz/gal) = 0.5% as Phosphoric acid (=25 drops when using 10 mL sample)