

# Shear 201



## Technical Dossier

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S H E P A R D   B R O S .   I N C .

# SHEAR 201

## Heavy Duty Liquid C.I.P.

### PRODUCT DESCRIPTION

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**SHEAR 201** is a heavy duty liquid alkaline C.I.P. detergent formulated for circulation, soak, and spray-cleaning of dairy and food processing equipment. **SHEAR 201** is authorized by the U.S. Department of Agriculture for use in federally inspected meat and poultry plants as a general cleaning agent on all surfaces.

### BENEFITS

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- Built-in water conditioner with chelates to prevent scale formulation.
- Product formulation provides long lasting stability during extended high temperature cleaning.
- Liquid formulation provides uniform solutions.
- Helps reduce labor - no mixing or dissolving required.
- Works in all water conditions.
- Leaves stainless steel surfaces bright and shiny - prevents hard water precipitates.
- Ideal for C.I.P. systems.
- Non-corrosive to stainless steel at recommended use dilutions.

### DIRECTIONS

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For use only with stainless steel processing equipment.  
Consult your Shepard Bros., Inc. representative for specific use instructions and recommended dispensing equipment.

### PROPERTIES AND SAFE HANDLING

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A Safety Data Sheet containing detailed information regarding the properties and safe handling of **SHEAR 201** is available on request and should be reviewed prior to using this product.

(Rev. 10/16)

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

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Code:** SH201  
**Product Name:** Shear 201  
**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:** CIP Alkaline Cleaner

## 2. HAZARDS IDENTIFICATION

### Skin Corrosion/Irritation, Category 1A



**GHS Signal Word:** Danger

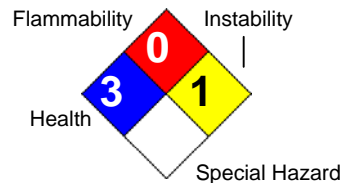
**GHS Hazard Phrases:** H332 - Harmful if inhaled. H314 - Causes severe skin burns and eye damage. May cause irreversible eye injury.

**GHS Precaution Phrases:** P271 - Use only outdoors or in a well-ventilated area.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P362+364 - Take off contaminated clothing and wash it before reuse.

**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. P332+313 - If skin irritation occurs, get 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/container in accordance with local/regional/national/international regulations.

### Hazard Rating System:



**NFPA Hazard Ratings**



# SAFETY DATA SHEET

## Shear 201

**Potential Health Effects (Acute and Chronic):** Chronic: Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

**Inhalation:** Causes chemical burns to the respiratory tract. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Irritation may lead to chemical pneumonitis and pulmonary edema.

**Skin Contact:** Causes skin burns. May cause deep, penetrating ulcers of the skin. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color. Corrosive, causes permanent skin damage (scarring).

**Eye Contact:** Corrosive. Will cause eye burns and permanent tissue damage. May cause irreversible eye injury.

**Ingestion:** May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause systemic effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
1310-73-2	Sodium hydroxide	40.0 - 50.0 %

### 4. FIRST AID MEASURES

**Emergency and First Aid Procedures:** 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 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 advice/attention.

**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 if irritation persists.

**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 aid immediately.

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

### 5. FIRE FIGHTING MEASURES

**Flash Pt:** NP Method Used: Estimate

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

**Autoignition Pt:** NP

**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. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.

**Flammable Properties and Hazards:** Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.



**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:** Use proper personal protective equipment as indicated in Section 8.  
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). Contain spill using an inert diking material. Transfer material into an approved container for possible recovery and reuse or for disposal. Do not let this chemical enter the environment.

**7. HANDLING AND STORAGE**

**Precautions To Be Taken in Handling:** 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 a cool, dry, well-ventilated area away from incompatible substances. Keep container closed when not in use. Store in a tightly closed container. Protect containers against damage. Store away from heat. Store away from sparks, flames. Protect from sunlight.

**Other Precautions:** 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
1310-73-2	Sodium hydroxide	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.
<b>Respiratory Equipment (Specify Type):</b>	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.			
<b>Eye Protection:</b>	Wear chemical splash goggles and a full-face shield where there is potential for eye contact.			
<b>Protective Gloves:</b>	Wear appropriate protective gloves to prevent skin exposure. Rubber or neoprene gloves.			
<b>Other Protective Clothing:</b>	Wear appropriate protective clothing to prevent skin exposure. Chemical resistant apron. Rubber or neoprene boots.			
<b>Engineering Controls (Ventilation etc.):</b>	Use adequate general or local exhaust ventilation to minimize exposure levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.			
<b>Work/Hygienic/Maintenance Practices:</b>	Handle in accordance with good industrial hygiene and safety practice.			



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid
<b>Appearance and Odor:</b>	Appearance: Transparent. colorless. Liquid. Odor: Odorless.
<b>Melting Point:</b>	< 32.0 F (0 C)
<b>Boiling Point:</b>	NA
<b>Autoignition Pt:</b>	NP
<b>Flash Pt:</b>	NP Method Used: Estimate
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Specific Gravity (Water = 1):</b>	1.49
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Solubility in Water:</b>	Complete
<b>pH:</b>	12.8-13.1 - (1% soln)
<b>Percent Volatile:</b>	No data.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.
<b>Stability:</b>	Unstable [ ] Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	Excess heat, Incompatible materials.
<b>Incompatibility - Materials To Avoid:</b>	Flammable liquids, acids, organic halogens. Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.
<b>Hazardous Decomposition Or Byproducts:</b>	High temperatures and flames may produce: Carbon monoxide, Carbon dioxide, oxides of phosphorus, Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ ] Will not occur [ X ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.

## 11. TOXICOLOGICAL INFORMATION

**Toxicological Information:** Epidemiology: No information found.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Mutagenicity: See actual entry in RTECS for complete information.  
Neurotoxicity: No information available.  
Other Studies: Ingredient CAS# 1310-73-2:  
Acute toxicity, LDLO, Oral, Species: Rabbit, 500.0 mg/kg

**Irritation or Corrosion:** Other Studies: Ingredient CAS# 1310-73-2:  
Standard Draize Test, Eyes, Species: Rabbit, 400.0 ug

**Carcinogenicity/Other Information:** CAS# 1310-73-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**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: Ingredient CAS# 1310-73-2:  
LC50, Common Shrimp, Sand Shrimp (Crangon crangon), adult(s), 33000 - 100000 ug/L, 48H, Mortality  
LC50, Western Mosquitofish (Gambusia affinis), adult(s), 125000 ug/L, 96H, Mortality  
LC50, Cockle (Cerastoderma edule), adult(s) 330000 - 1000000 ug/L, 48H, Mortality  
LC50, Guppy (Poecilia reticulata), young organism(s), 196.0 mg/L, 96H, Mortality

## 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:** Sodium Hydroxide Solution.  
**DOT Hazard Class:** 8      CORROSIVE  
**UN/NA Number:** UN1824      **Packing Group:** II





# SAFETY DATA SHEET

## Shear 201

### 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)
1310-73-2	Sodium hydroxide	No	Yes 1000 LB	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
1310-73-2	Sodium hydroxide	TSCA: Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8

### 16. OTHER INFORMATION

**Revision Date:** 06/30/2013

**Additional Information About** 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.



# SHEAR 201

## LIQUID C.I.P.



### DANGER

Causes severe skin burns and eye damage

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

### First Aid:

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 fatal if swallowed in large amounts. Take proper precautions, especially when using this product in an enclosed or semi-enclosed area. At elevated temperatures, this product may react with the reducing sugars in foods and beverages to produce toxic carbon monoxide. When entering a tank, even an empty one, follow all appropriate confined entry procedures (ANSI Z117.1).

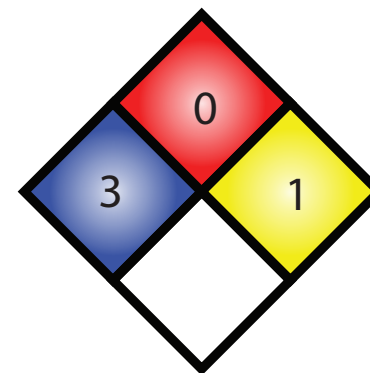
KEEP OUT OF REACH OF CHILDREN.



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

CONTAINS: SODIUM HYDROXIDE. DO NOT USE ON ALUMINUM OR MIX WITH ACIDS.

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



Read safety data sheets for more detailed information.

PROPER SHIPPING NAME:

# UN1824,

SODIUM HYDROXIDE SOLUTION, 8, PGII

PRODUCT ID:

BATCH NO.:

NET CONTENTS:

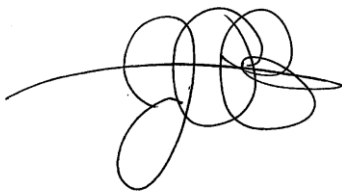
January 1, 2020

Based on current U.S. Food and Drug Administration Guidelines, this Letter of Guarantee certifies that the Shepard Bros., Inc. product, **Shear 201**, is safe and suitable as a cleaning agent for use only in soak tanks or with steam or mechanical cleaning devices 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,



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



Shepard Bros., Inc.  
503 S. Cypress St.  
La Habra, CA 90631

SHEPARD BROS. (562) 697-1366

**SHEAR 201**  
Caustic Soda Test Kit  
**SBRTK3035-Z**

1. Rinse vial 3 times with solution to be tested.
2. Fill bottle to the 5 or 10mL mark with sample.
3. Add 3 drops of Phenolphthalein indicator (PH1605), and swirl to mix. The solution should turn pink.
4. Add Hydrochloric acid 2.5 N, one drop at a time, swirling after each drop, until color changes from pink to colorless. Hold dropper vertically. Count number of drops added.

Results:

5. **\*\*\* If using 5 mL sample: 1 drop = 800 ppm alkalinity as caustic soda (by weight)**

number of drops x 0.080 to obtain % alkalinity as Caustic Soda (by weight)

number of drops x 0.125 to obtain % product (by volume)

number of drops x 0.167 to obtain fl-oz product/gal

number of drops x 1250 to obtain ppm product in solution (by volume)

**Example:** 0.5 % Caustic Soda (by weight)= 7 drops

1.0 % Caustic Soda (by weight)= 13 drops

1 fl-oz/gal = 6 drops

1% solution by vol = 8 drops

6. **\*\*\*If using 10 mL sample: 1 drop = 400 ppm alkalinity as caustic soda (by weight)**

number of drops x 0.04 to obtain % alkalinity as Caustic Soda (by weight)

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

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

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

**Example:** 0.5 % Caustic Soda (by weight)= 13 drops

1fl-oz/gal = 13 drops

1% solution by vol = 17 drops

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



Shepard Bros., Inc.  
503 S. Cypress St.  
La Habra, CA 90631

SHEPARD BROS. (562) 697-1366

**SHEAR 201**  
Caustic Soda Test Kit  
**SBRTK3000-Z**

1. Rinse vial 3 times with solution to be tested.
2. Fill bottle to the 10 or 20 mL mark with sample.
3. Add 3 drops of Phenolphthalein indicator (PH1605), and swirl to mix. The solution should turn pink.
4. Add Hydrochloric Acid 7.7N (HA6207), dropwise while stirring until the sample returns to its original color. Hold dropper vertically. Count number of drops added.

Results:

5. **\*\*\*If using 10 mL sample: 1 drop = 0.1% alkalinity as sodium hydroxide (by weight) or 1 drop = 1000 ppm alkalinity as sodium hydroxide (by weight)**

Multiply number of drops x 0.1 to obtain % alkalinity as Caustic Soda (by weight)

Multiply number of drops x 0.143 to obtain % product (by volume)

Multiply number of drops x 0.2 to obtain fl-oz product/gal

Multiply number of drops x 1430 to obtain ppm product in solution (by vol)

**Example:** 0.5 % as Sodium Hydroxide = 5 drops

1.0 % as Sodium Hydroxide = 10 drops

1 fl-oz/gal = 5 drops

1% solution by vol = 7 drops

6. **\*\*\*If using 20 mL sample: 1 drop = 0.05% alkalinity as sodium hydroxide (by weight) or 1 drop = 500 ppm alkalinity as sodium hydroxide (by weight)**

Multiply number of drops x 0.05 to obtain % alkalinity as Caustic Soda (by weight)

Multiply number of drops x 0.077 to obtain % product (by volume)

Multiply number of drops x 0.10 to obtain fl-oz product/gal

Multiply number of drops x 770 to obtain ppm product in solution (by vol)

**Example:** 0.5 % as Sodium Hydroxide = 10 drops

1fl-oz/gal = 10 drops

1% solution by vol = 13 drops

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

2.24% solution Shear 201 ( 2 fl-oz/gal) = 1% caustic soda (=10 drops when using 10 mL sample)

2.8% solution Shear 201( 2.5 fl-oz/gal) = 1.25 % caustic soda (=13 drops when using 10 mL sample)

3.4% solution Shear 201 (3 fl-oz/gal) = 1.5 % caustic soda (= 15 drops when using 10 mL sample)

4.5% solution Shear 201 (4fl-oz/gal)= 2.0 % caustic soda (= 20 drops when using 10 mL sample)

5.6 % solution Shear 201 (5 fl-oz/gal) = 2.5 % caustic soda (= 25 drops when using 10 mL sample)

Note: \*\*To change the concentration of caustic soda by 1%; add 1.6 gals (20 lbs) of Shear 201 for every 100 gallons of solution