

Shear 202



Technical Dossier

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

SHEAR 202

Heavy Duty Liquid C.I.P.

PRODUCT DESCRIPTION

SHEAR 202 is a low temperature stable, heavy duty liquid alkaline cleaner formulated for circulation, soak, and spray cleaning of dairy and food processing equipment.

ADVANTAGES AND BENEFITS

- Formula is freeze protected down to 40° F.
- Low-foaming formulation.
- Built-in water conditioner to prevent scale formulation.
- Remains stable during extended high temperature cleaning.
- Liquid formulation feeds easily providing uniform solutions.
- Versatile one-product, multi-job cleaner.
- No mixing or dissolving required.
- Works in all water conditions.
- Leaves stainless steel surfaces bright and shiny.
- Non-corrosive to stainless steel at recommended use dilutions.

DIRECTIONS

Typical Use Dilution: 1-4 fluid oz. to one gallon water

Heavy duty cleaning applications may warrant the use of more concentrated cleaning solutions

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 **SHEAR 202** is available on request and should be reviewed prior to using this product.

(Rev. 7/18)

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.

Shepard Bros., Inc.

503 S. Cypress St. La Habra, CA 90631

(800) 645-3594

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: H2020W
Product Name: Shear 202
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:

Intended Use:

2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 4

Skin Corrosion/Irritation, Category 1A



GHS Signal Word:

Danger

GHS Hazard Phrases:

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

GHS Precautionary Phrases:

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.

GHS Response Phrases:

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.

GHS Storage and Disposal Phrases:

P405 - Store locked up.
P501 - Dispose of contents and containers in accordance with local, regional, national, and international regulations.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

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
1310-58-3	Potassium hydroxide	<20.0 %
1310-73-2	Sodium hydroxide	<15.0 %

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
Indication of any immediate medical attention and special treatment needed:	No data available.

5. FIRE FIGHTING MEASURES

Flash Pt:	NA 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:	No data available.
Hazardous Combustion Products:	No data available.

6. ACCIDENTAL RELEASE MEASURES

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



7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Precautions To Be Taken in Storing: Keep container tightly closed in a dry and well-ventilated place. Absorbs carbon dioxide from air.
Air sensitive. strongly hygroscopic.
Storage class 510) Non-combustible, corrosive hazardous materials.

Other Precautions: 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
1310-58-3	Potassium hydroxide	No data.	CEIL: 2 mg/m3	No data.
1310-73-2	Sodium hydroxide	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
1310-58-3	Potassium hydroxide	NIOSH	TWA: 1 mg/m3 CEIL: 2 mg/m3	
1310-73-2	Sodium hydroxide	NIOSH	CEIL: 2 mg/m3	

Respiratory Equipment (Specify Type): Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

Eye Protection: Face shield and safety glasses.

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 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.

Other Protective Clothing: Complete suit protecting against chemicals.

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: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas	[X] Liquid	[] Solid
Appearance and Odor:	solid. No data available. Odor Threshold: Color:		
pH:	> 12 - (1% soln) at 25.0 C		
Melting Point:	318.00 C		
Boiling Point:	1.00 C		
Flash Pt:	NA 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):	1.32		
Density:	2.0809 G/CM3		
Bulk density:	NA		
Solubility in Water:	Complete		
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 [] Stable [X]
Conditions To Avoid - Instability:	Heat of solution is very high, and with limited amounts of water, violent boiling may occur. No data available.
Incompatibility - Materials To Avoid:	Nitro compounds, Organic materials, magnesium, Copper, Water. Reacts violently with 1, Metals, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. vigorous reaction with:, Alkali metals, Halogens, Azides, Strong oxidizing agents, Strong acids.
Hazardous Decomposition or Byproducts:	No data available. In the event of fire: see section 5.
Possibility of Hazardous Reactions:	Will occur [X] Will not occur []
Conditions To Avoid -	No data available.

Hazardous Reactions:

11. TOXICOLOGICAL INFORMATION

Toxicological Information:	Acute toxicity: Dermal. No data available. Germ cell mutagenicity: Reproductive toxicity: Aspiration hazard: Inhalation:
Irritation or Corrosion:	Skin corrosion/irritation. Result: Tumorigenic: Tumors at site or application. Serious eye damage/eye irritation: Eyes: Rabbit. Corrosive to eyes . Causes severe burns. Rabbit.
Sensitization:	No data available. Will not occur.
Chronic Toxicological Effects:	Specific target organ toxicity -single exposure (Globally Harmonized System) No data available. Specific target organ toxicity -repeated exposure: no data available.
Carcinogenicity/Other Information:	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.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. 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:	The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
Other adverse effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful 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.
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14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide, Sodium hydroxide)
DOT Hazard Class: 8 CORROSIVE
UN/NA Number: UN3266 **Packing Group:** III


AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Corrosive liquid, basic, inorganic, n.o.s.
UN Number: 3266 **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)
1310-58-3	Potassium hydroxide	No	Yes 1000 LB	No
1310-73-2	Sodium hydroxide	No	Yes 1000 LB	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 checked="" type="checkbox"/> Yes <input 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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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)

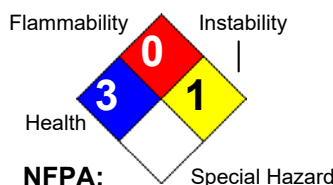
1310-58-3 Potassium hydroxide
 1310-73-2 Sodium hydroxide

Other US EPA or State Lists

TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8
 TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC: Cat. IIb, Title 8

16. OTHER INFORMATION

Revision Date: 06/09/2020
Preparer Name: Jose Arias 562-697-1366

Hazard Rating System:


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



SAFETY DATA SHEET

Shear 202

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Supersedes Revision: 05/02/2018

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 202

(Formerly Hydro 2020W)

ALKALINE CLEANER

DANGER

Harmful if swallowed.

Causes severe skin burns and eye damage

Precautionary Statements: Do not breathe mist/vapors/spray. Do not eat, drink or smoke when using this product. 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 you feel unwell, call a POISON CENTER or a doctor.

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. 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.



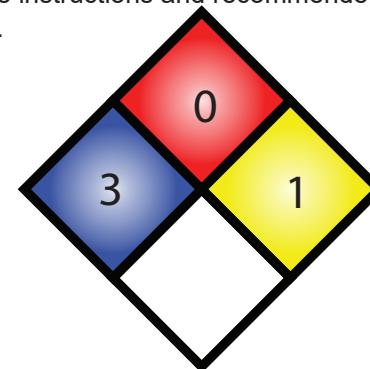
SHEPARD BROS., INC.
503 S. CYPRESS ST.
La Habra, CA 90631 • (562) 697-1366

**SAME
TRUSTED
FORMULA**



CONTAINS: POTASSIUM HYDROXIDE; SODIUM HYDROXIDE. DO NOT MIX WITH ACID.

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:

UN3266,
CORROSIVE LIQUID, BASIC, INORGANIC,
N.O.S., (POTASSIUM HYDROXIDE, SODIUM
HYDROXIDE), 8, PGII

PRODUCT ID:

BATCH NO.:

NET CONTENTS:



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

SHEPARD BROS. (562) 697-1366

Shear 202
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.

5. **Results:**

*****If using 10 mL sample:**

- 1 drop = 0.1% alkalinity as sodium hydroxide (by weight) (or 1000 ppm as NaOH by weight)
- 1 drop = 0.14% alkalinity as potassium hydroxide (by weight) (or 1400 ppm as KOH by weight)
- Multiply number of drops x 0.1 to obtain % alkalinity as Caustic Soda (by weight)
- Multiply number of drops x 0.14 to obtain % alkalinity as Potassium Hydroxide (by weight)
- Multiply number of drops x 0.25 to obtain % product (by volume)
- Multiply number of drops x 0.334 to obtain fl-oz product/gal
- Multiply number of drops x 2500 to obtain ppm product in solution (by vol)

Example: 1 fl-oz/gal = 3 drops

1% solution by vol = 4 drops

1.0 % as Sodium Hydroxide = 25 drops

*****If using 20 mL sample:**

- 1 drop = 0.05% alkalinity as sodium hydroxide (by weight) (or 500 ppm as NaOH by weight)
- 1 drop = 0.07% alkalinity as potassium hydroxide (by weight) (or 700 ppm as KOH by weight)
- Multiply number of drops x 0.05 to obtain % alkalinity as Caustic Soda (by weight)
- Multiply number of drops x 0.07 to obtain % alkalinity as Potassium Hydroxide (by weight)
- Multiply number of drops x 0.125 to obtain % product (by volume)
- Multiply number of drops x 0.167 to obtain fl-oz product/gal
- Multiply number of drops x 1250 to obtain ppm product in solution (by vol)

Example: 1 fl-oz/gal = 6 drops

1% solution by vol = 8 drops

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