



your partner in food safety

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Version 1

# Safety Data Sheet

## 1. IDENTIFICATION

### Product identifier

**Product Name** Brute-4S

### Other means of identification

**SDS #** BIR-024

**Product Code** I01935  
**UN/ID No** UN3266

### Recommended use of the chemical and restrictions on use

**Recommended Use** Clean in place cleaning and tripe washing that is formulated for low temperature use.

### Details of the supplier of the safety data sheet

#### Supplier Address

Birko Corporation  
9152 Yosemite Street  
Henderson, CO 80640-8027  
www.birkocorp.com

### Emergency telephone number

**Company Phone Number** Phone: 303-289-1090 or 1-800-525-0476  
Fax: 303-289-1190  
**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Appearance** Clear liquid

**Physical state** Liquid

**Odor** None

### Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### Signal Word

**Danger**

### Hazard statements

Causes severe skin burns and eye damage



**Precautionary Statements - Prevention**

Do not breathe dusts or mists  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor  
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 doctor  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Immediately call a POISON CENTER or doctor  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards**

Harmful to aquatic life with long lasting effects

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	40-50
Potassium hydroxide	1310-58-3	<5
Sodium chlorate	7775-09-9	<1
Sodium carbonate	497-19-8	<1

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General Advice</b>	Immediately call a poison center or doctor/physician.
<b>Eye Contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
<b>Skin Contact</b>	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	May be harmful in contact with skin. Causes severe skin burns and eye damage.
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**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.**Specific Hazards Arising from the Chemical**

Not determined.

**Protective equipment and precautions for firefighters**

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

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Use personal protective equipment as required.

**Environmental precautions****Methods and material for containment and cleaning up****Methods for Containment**

Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up**

Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling****Advice on Safe Handling**

Do not breathe dusts or mists. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Store locked up.

**Incompatible Materials**

None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

**Appropriate engineering controls****Engineering Controls**

Apply technical measures to comply with the occupational exposure limits.

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Refer to 29 CFR 1910.133 for eye and face protection regulations.
<b>Skin and Body Protection</b>	Refer to 29 CFR 1910.138 for appropriate skin and body protection.
<b>Respiratory Protection</b>	Refer to 29 CFR 1910.134 for respiratory protection requirements.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Odor</b>	None
<b>Appearance</b>	Clear liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	13.1	
<b>Melting point / freezing point</b>	-6.7- -3.9 °C / 20-25 °F	
<b>Boiling point / boiling range</b>	Not determined	
<b>Flash point</b>	Not determined	
<b>Evaporation Rate</b>	Not determined	
<b>Flammability (Solid, Gas)</b>	Not determined	
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>	Not determined	
<b>Lower flammability or explosive limits</b>	Not determined	
<b>Vapor Pressure</b>	Not determined	
<b>Vapor Density</b>	Not determined	
<b>Relative Density</b>	Not determined	
<b>Water Solubility</b>	Not determined	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Autoignition temperature</b>	Not determined	
<b>Decomposition temperature</b>	Not determined	
<b>Kinematic viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	

### Other information

<b>Liquid Density</b>	1.53
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## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible materials

None known based on information supplied.

**Hazardous decomposition products**

None known based on information supplied.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information**

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	May be harmful in contact with skin.
<b>Inhalation</b>	Do not inhale.
<b>Ingestion</b>	Do not ingest.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide 1310-73-2	140 - 340 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	-
Potassium hydroxide 1310-58-3	= 284 mg/kg ( Rat )	-	-
Sodium Chloride 7647-14-5	= 3 g/kg ( Rat )	> 10 g/kg ( Rabbit )	> 42 g/m <sup>3</sup> ( Rat ) 1 h
Sodium chlorate 7775-09-9	= 6250 mg/kg ( Rat ) = 4950 mg/kg ( Rat )	> 10 g/kg ( Rabbit ) > 2000 mg/kg ( Rabbit )	> 5.59 mg/L ( Rat ) 4.5 h > 28 g/m <sup>3</sup> ( Rat ) 1 h
Sodium carbonate 497-19-8	= 4090 mg/kg ( Rat )	-	-

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Symptoms</b>	Please see section 4 of this SDS for symptoms.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Causes severe skin burns.
<b>Serious eye damage/eye irritation</b>	Causes severe eye damage.
<b>Carcinogenicity</b>	Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

<b>Oral LD50</b>	6,622.00 mg/kg
<b>Dermal LD50</b>	2,903.00 mg/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Component Information**

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium hydroxide 1310-73-2		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static	
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static	
Sodium Chloride 7647-14-5		6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 7050: 96 h Pimephales promelas mg/L LC50 semi-static 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static 12946: 96 h Lepomis macrochirus mg/L LC50 static 4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through	1000: 48 h Daphnia magna mg/L EC50 340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static
Sodium chlorate 7775-09-9		1750: 96 h Oncorhynchus mykiss mg/L LC50 4200: 24 h Oncorhynchus mykiss mg/L LC50 13500: 96 h Pimephales promelas mg/L LC50 7090: 96 h Cyprinus carpio mg/L LC50	1093: 24 h Daphnia magna mg/L EC50
Sodium carbonate 497-19-8	242: 120 h Nitzschia mg/L EC50	300: 96 h Lepomis macrochirus mg/L LC50 static 310 - 1220: 96 h Pimephales promelas mg/L LC50 static	265: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

There is no data for this product.

**Mobility**

Chemical name	Partition coefficient
Potassium hydroxide 1310-58-3	0.65 0.83

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical name	California Hazardous Waste Status
Sodium hydroxide 1310-73-2	Toxic Corrosive
Potassium hydroxide 1310-58-3	Toxic Corrosive
Sodium chlorate	Toxic

7775-09-9	Ignitable
Sodium carbonate 497-19-8	Corrosive

#### 14. TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

##### DOT

UN/ID No UN3266  
 Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium hydroxide)  
 Hazard class 8  
 Packing Group II

##### IATA

UN number UN3266  
 Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium hydroxide)  
 Transport hazard class(es) 8  
 Packing Group II

##### IMDG

UN number UN3266  
 Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium hydroxide)  
 Transport hazard class(es) 8  
 Packing Group II

#### 15. REGULATORY INFORMATION

##### International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/E LINC	ENCS	IECSC	KECL	PICCS	AICS
Sodium hydroxide	X	X	X	X	X	X	X	X
Potassium hydroxide	X	X	X	X	X	X	X	X
Sodium Chloride	X	X	X	X	X	X	X	X
Sodium chlorate	X	X	X	X	X	X	X	X
Sodium carbonate	X	X	X	X	X	X	X	X

##### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINC** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

##### US Federal Regulations

##### CERCLA

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1000 lb			X
Potassium hydroxide	1000 lb			X

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X
Potassium hydroxide 1310-58-3	X	X	X
Sodium chlorate 7775-09-9	X	X	X

**16. OTHER INFORMATION****NFPA****Health Hazards**

2

**Flammability**

0

**Instability**

2

**Special Hazards**

-

**HMIS****Health Hazards**

3

**Flammability**

0

**Physical hazards**

2

**Personal Protection**

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Issue Date:

27-Nov-2017

Revision Date:

12-Dec-2017

Revision Note:

New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**