



your partner in food safety

Issue Date: 27-Nov-2017

Revision Date: 12-Dec-2017

Version 1

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**

General Advice Immediately call a poison center or doctor/physician.

Eye Contact 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.

Skin Contact Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.

Ingestion Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms May be harmful in contact with skin. Causes severe skin burns and eye damage.

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 ³	TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Appropriate engineering controls**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.**Individual protection measures, such as personal protective equipment**

Eye/Face Protection Refer to 29 CFR 1910.133 for eye and face protection regulations.
Skin and Body Protection Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	None
Appearance	Clear liquid		
Color	Colorless	Odor Threshold	Not determined
Property	Values	Remarks • Method	
pH	13.1		
Melting point / freezing point	-6.7- -3.9 °C / 20-25 °F		
Boiling point / boiling range	Not determined		
Flash point	Not determined		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not determined		
Flammability Limit in Air			
Upper flammability or explosive limits	Not determined		
Lower flammability or explosive limits	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Relative Density	Not determined		
Water Solubility	Not determined		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	Not determined		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

Other information

Liquid Density	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**

Eye Contact	Avoid contact with eyes.
Skin Contact	May be harmful in contact with skin.
Inhalation	Do not inhale.
Ingestion	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 ³ (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 ³ (Rat) 1 h)
Sodium carbonate 497-19-8	= 4090 mg/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	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

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes severe eye damage.
Carcinogenicity	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 .

Oral LD50	6,622.00 mg/kg
Dermal LD50	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 <i>Oncorhynchus mykiss</i> mg/L LC50 static	
Potassium hydroxide 1310-58-3		80: 96 h <i>Gambusia affinis</i> mg/L LC50 static	
Sodium Chloride 7647-14-5		6420 - 6700: 96 h <i>Pimephales</i> <i>promelas</i> mg/L LC50 static 7050: 96 h <i>Pimephales promelas</i> mg/L LC50 semi-static 6020 - 7070: 96 h <i>Pimephales promelas</i> mg/L LC50 static 12946: 96 h <i>Lepomis</i> <i>macrochirus</i> mg/L LC50 static 4747 - 7824: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 5560 - 6080: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through	1000: 48 h <i>Daphnia magna</i> mg/L EC50 340.7 - 469.2: 48 h <i>Daphnia</i> <i>magna</i> mg/L EC50 Static
Sodium chlorate 7775-09-9		1750: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 4200: 24 h <i>Oncorhynchus mykiss</i> mg/L LC50 13500: 96 h <i>Pimephales promelas</i> mg/L LC50 7090: 96 h <i>Cyprinus</i> <i>carpio</i> mg/L LC50	1093: 24 h <i>Daphnia magna</i> mg/L EC50
Sodium carbonate 497-19-8	242: 120 h <i>Nitzschia</i> mg/L EC50	300: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 310 - 1220: 96 h <i>Pimephales promelas</i> mg/L LC50 static	265: 48 h <i>Daphnia magna</i> 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 LINCS	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/ELINCS - 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	Flammability	Instability	Special Hazards
	2	0	2	-
HMIS	Health Hazards	Flammability	Physical hazards	Personal Protection
	3	0	2	J

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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