

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Brute Machine Dish Detergent
Product code : 155-9631

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Machine dishwash detergent and deodorizers

1.4. Supplier's details

American Cleaning Solutions
39-30 Review Avenue
Long Island City, NY, 11101
T (718) 392-8080

1.5. Emergency phone number

Emergency number : INFOTRAC: 800-535-5053

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals, Category 1	H290	May be corrosive to metals.
Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Full text of H statements : see section 16		

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) :

- H290 - May be corrosive to metals
- H302 - Harmful if swallowed
- H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS US) :

- P234 - Keep only in original packaging.
- P260 - Do not breathe dusts or mists.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
- P301+P312 - If swallowed: Call a poison center/doctor if you feel unwell
- P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

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skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 - 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/doctor

P321 - Specific treatment (see supplemental first aid instruction on this label).

P330 - Rinse mouth.

P363 - Take off immediately all contaminated clothing and wash it before reuse.

P390 - Absorb spillage to prevent material-damage.

P405 - Store locked up.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Potassium Hydroxide, 45%≤conc<50%, aqueous solutions	CAS-No.: 1310-58-3	20 – 30	Acute Tox. 3 (Oral), H301 Skin Corr. 1, H314
Disodium metasilicate	CAS-No.: 6834-92-0	5 – 10	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.
First-aid measures after 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.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a poison center or doctor/physician.

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4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

Environmental precautions	: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
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6.2. Methods and materials for containment and cleaning up

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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See Heading 8. Exposure controls and personal protection.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust/mist/spray. Avoid contact during pregnancy/while nursing.
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Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Comply with applicable regulations.
Storage conditions : Keep only in the original container in a cool, well ventilated place away from heat, hot surfaces, sparks, open flame and other ignition sources. No smoking. Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)

USA - ACGIH - Occupational Exposure Limits

Local name	Potassium hydroxide
Remark (ACGIH)	URT, eye, & skin irr

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear protective gloves/eye protection/face protection protective gloves
Eye protection:
Chemical goggles or face shield
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid

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Color	: clear
Odor	: mild
Odor threshold	: No data available
pH	: 13
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 212 – 220 °F
Flash point	: ≥ 200 °F
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Same as water
Relative density	: 1.24
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : corrosive vapors.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : corrosive vapors.

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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ATE US (oral)	1288.654 mg/kg body weight
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Disodium metasilicate (6834-92-0)	
LD50 oral rat	1152 – 1349 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rat	> 5000 mg/kg body weight (EPA OPPTS 870.1200: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 2.06 mg/l/4h (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Read-across)
ATE US (oral)	1152 mg/kg body weight
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
LD50 oral rat	273 mg/kg (Rat, Oral)
ATE US (oral)	273 mg/kg body weight
Skin corrosion/irritation	: Causes severe skin burns. pH: 13
Disodium metasilicate (6834-92-0)	
pH	No data available in the literature
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
pH	14 (5 %)
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: 13
Disodium metasilicate (6834-92-0)	
pH	No data available in the literature
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
pH	14 (5 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
Disodium metasilicate (6834-92-0)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Disodium metasilicate (6834-92-0)	
Viscosity, kinematic	Not applicable (solid)
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
Viscosity, kinematic	5.705 mm²/s
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

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SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Disodium metasilicate (6834-92-0)	
LC50 - Fish [1]	210 mg/l (ISO 7346-1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	1700 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)

LC50 - Fish [1]	80 mg/l (96 h, Gambusia affinis, Pure substance)
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12.2. Persistence and degradability

Brute Machine Dish Detergent	
Persistence and degradability	Not established.
Disodium metasilicate (6834-92-0)	
Persistence and degradability	Biodegradability: not applicable, No (test)data on mobility of the substance available, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Brute Machine Dish Detergent	
Bioaccumulative potential	Not established.
Disodium metasilicate (6834-92-0)	
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Disodium metasilicate (6834-92-0)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for adsorption in soil.

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Potassium Hydroxide, 45%=<conc<50%, aqueous solutions (1310-58-3)

Ecology - soil

No (test)data on mobility of the component(s) available.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No
Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with local/regional/national/international regulations.
Ecological information : Avoid release to the environment.

SECTION 14 Transport information

14.1. UN number

UN-No.(DOT) : UN1760
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8



TDG

Transport hazard class(es) (TDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : II
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

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14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No.(DOT) : UN1760

DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

TDG

Emergency Response Guide (ERG) Number : 154

IMDG

No data available

IATA

No data available

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

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Name	CAS-No.	Listing	Commercial status	Flags
Disodium metasilicate	6834-92-0	Not present	-	
Potassium Hydroxide, 45%≤conc<50%, aqueous solutions	1310-58-3	Present	Active	

Potassium Hydroxide, 45%≤conc<50%, aqueous solutions (1310-58-3)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ

1000 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

No additional information available

SECTION 16 Other information

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Issue date : 4/15/2015

Other information : None.

Full text of hazard classes and H-statements	
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H335	May cause respiratory irritation

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Personal protection : B - Safety glasses, Gloves

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.