

TUFFY

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Identification

Product form : Mixture
Product name : TUFFY
Product code : TUF

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial and Institutional Alkaline Detergent

1.3. Details of the supplier of the safety data sheet

Bruco, Inc.
2525 Overland Ave.
Billings, MT 59102 - USA
T (800) 652-1020
www.bruco.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1A H314

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Causes severe skin burns and eye damage

Precautionary statements (GHS-US)

Prevention

: Do not breathe fume, gas, mist, spray, vapours.
Wash hands and exposed skin thoroughly after handling.
Wear eye protection, face protection, protective clothing, protective gloves.

Response

: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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, a doctor.
Wash contaminated clothing before reuse.

Storage

: Store locked up.

Disposal

: Dispose of contents/container in accordance with local/state/federal regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
2-butoxyethanol	(CAS No) 111-76-2	5 - 10	Flam. Liq. 4, H227 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2B, H320
Sodium hydroxide	(CAS No) 1310-73-2	3 - 10	Skin Corr. 1A, H314 Aquatic Acute 3, H402
Disodium metasilicate	(CAS No) 6834-92-0	1 - 3	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Burns.
- Symptoms/injuries after eye contact : Serious damage to eyes.
- Symptoms/injuries after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : All extinguishing media allowed. Adapt extinguishing media to the environment.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Non combustible.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Use personal protective equipment (PPE). Avoid contact with skin and eyes. Ventilate spillage area. Do not breathe fume, gas, mist, spray, vapours.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. See Section 12 for additional Ecological information.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Store away from other materials.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe fume, gas, mist, spray, vapours. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong acids. Strong oxidizing agents.
- Incompatible materials : Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-butoxyethanol (111-76-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	240 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm
Sodium hydroxide (1310-73-2)		
ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
ACGIH	Remark (ACGIH)	URT, eye, & skin irr
OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear, red liquid
- Colour : Red
- Odour : Characteristic
- Odour threshold : No data available
- pH : 12 - 12.5
- pH solution : 1 %
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Flammability (solid, gas) : No data available
- Explosive limits : No data available
- Explosive properties : No data available
- Oxidising properties : No data available
- Vapour pressure : No data available
- Relative density : 1.05
- Relative vapour density at 20 °C : No data available
- Density : 8.77 lb/gal

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Solubility	: Soluble in water
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content	: 7.1 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

2-butoxyethanol (111-76-2)	
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	435 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; 435 mg/kg bodyweight; Rabbit; Weight of evidence; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	2.17 mg/l/4h (Rat; Experimental value; 2.35 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	450-486,Rat; Weight of evidence
ATE US (dermal)	435 mg/kg bodyweight
ATE US (vapours)	2.17 mg/l/4h
ATE US (dust,mist)	2.17 mg/l/4h
Disodium metasilicate (6834-92-0)	
LD50 oral rat	1153 mg/kg
LD50 dermal rat	> 5000 mg/kg bodyweight (Rat; Read-across; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	1153 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 12 - 12.5

Serious eye damage/irritation : Not classified
pH: 12 - 12.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.
Symptoms/injuries after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

2-butoxyethanol (111-76-2)	
ErC50 (algae)	911 mg/l (72 Hr.)
Disodium metasilicate (6834-92-0)	
LC50 fish 1	210 mg/l (LC50; Equivalent or similar to OECD 203; 96 h; Brachydanio rerio; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 1	207 mg/l (EC50; DIN 38412-9; 72 h; Scenedesmus subspicatus; Fresh water)
Sodium hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

2-butoxyethanol (111-76-2)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.71 g O ₂ /g substance
Chemical oxygen demand (COD)	2.20 g O ₂ /g substance
ThOD	2.305 g O ₂ /g substance
BOD (% of ThOD)	0.31
Disodium metasilicate (6834-92-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Sodium hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

2-butoxyethanol (111-76-2)	
Log Pow	0.81 (Experimental value; BASF test; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Disodium metasilicate (6834-92-0)	
Bioaccumulative potential	Bioaccumulation: not applicable.
Sodium hydroxide (1310-73-2)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

2-butoxyethanol (111-76-2)	
Surface tension	0.027 N/m (25 °C)

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/state/federal regulations.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT:

Transport document description	: UN3266 Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Sodium metasilicate), 8, III
UN-No.(DOT)	: UN3266
Proper Shipping Name (DOT)	: Corrosive liquid, basic, inorganic, n.o.s. Sodium hydroxide, Sodium metasilicate
Transport hazard class(es) (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT)	: 8 - Corrosive



Packing group (DOT)	: III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Symbols	: G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 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 Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters", 52 - Stow "separated from" acids
Other information	: No supplementary information available.

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Formaldehyde	CAS No 50-00-0	< 0.1%
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2-butoxyethanol (111-76-2)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	100 %
Sodium hydroxide (1310-73-2)	
Not subject to reporting requirements of the United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	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. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

2-butoxyethanol (111-76-2)	
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
Sodium hydroxide (1310-73-2)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Indication of changes : HCS 2012 Compliance Update.

Revision date : 07/23/2015

Full text of H-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
Eye Irrit. 2B	Serious eye damage/eye irritation, Category 2B
Flam. Liq. 4	Flammable liquids, Category 4
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H320	Causes eye irritation
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012)

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