Printing date July 29, 2015

Reviewed on July 29, 2015

1 Identification

- · Product identifier
- · Trade name: Break-Free Carbon Cutter
- · Article number: CAC-4-1, CAC-4-10
- · Recommended use and restriction on use
- · Recommended use: Cleaner solvent
- · Restrictions on use: Contact manufacturer.
- · Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

Safariland, LLC 13386 International Parkway Jacksonville, FL 32218 Customer Care (800) 347-1200



· Emergency telephone number:

ChemTel Inc. (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

STOT SE 3 H335 May cause respiratory irritation.

Flam. Liq. 4 H227 Combustible liquid.

Additional information:

0 percent of the mixture consists of ingredient(s) of unknown toxicity.

There are no other hazards not otherwise classified that have been identified.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

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· Hazard pictograms







GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

2-aminoethanol

N-methyl-2-pyrrolidone

dodecylbenzenesulphonic acid

· Hazard statements

H227 Combustible liquid.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from flames and hot surfaces. – No smoking.

P260 Do not breathe mist/vapors/spray. P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P233 Keep container tightly closed.

P271 Use only outdoors or in a well-ventilated area.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse

skin with water/shower.

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.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

breathing.

P363 Wash contaminated clothing before reuse.

P308+P313 IF exposed or concerned: Get medical advice/attention. P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

P405 Store locked up.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Classification system:

NFPA ratings (scale 0 - 4)



Health = 3 Fire = 2 Reactivity = 0

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Safety Data Sheet acc. to OSHA HCS (29 CFR 1910.1200)

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· HMIS-ratings (scale 0 - 4)



- * Indicates a long term health hazard from repeated or prolonged exposures.
- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:			
141-43-5	2-aminoethanol Skin Corr. 1B, H314 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335 Flam. Liq. 4, H227	10-25%	
111-76-2	2-butoxyethanol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319 Flam. Liq. 4, H227	10-25%	
872-50-4	N-methyl-2-pyrrolidone Repr. 1B, H360 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 Flam. Liq. 4, H227	2.5-10%	
27176-87-0	dodecylbenzenesulphonic acid Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302	2.5-10%	

· Additional information:

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

- · Description of first aid measures
- General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

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· After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eve contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed

Coughing

Strong caustic effect on skin and mucous membranes.

May cause respiratory irritation.

· Danger

Danger of gastric perforation.

Causes serious eve damage.

Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · For safety reasons unsuitable extinguishing agents: None.
- · Special hazards arising from the substance or mixture

Combustible liquid.

During heating or in case of fire poisonous gases are produced.

- · Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information Cool endangered product with water spray.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation.

Keep away from ignition sources.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

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Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Prevent formation of aerosols.

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

- · Information about protection against explosions and fires: Combustible liquid.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

Store only in the original receptacle.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

- · Further information about storage conditions: Keep containers tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:				
141-43-5 2-aminoethanol				
PEL (USA)	Long-term value: 6 mg/m³, 3 ppm			
REL (USA)	Short-term value: 15 mg/m³, 6 ppm Long-term value: 8 mg/m³, 3 ppm			
TLV (USA)	Short-term value: 15 mg/m³, 6 ppm Long-term value: 7.5 mg/m³, 3 ppm			
EL (Canada)	Short-term value: 6 ppm Long-term value: 3 ppm			
EV (Canada)	Short-term value: 15 mg/m³, 6 ppm Long-term value: 7.5 mg/m³, 3 ppm			
LMPE (Mexico)	Short-term value: 6 ppm Long-term value: 3 ppm			

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111-76-2 2-but	(Contd. of page 5			
PEL (USA)	Long-term value: 240 mg/m³, 50 ppm Skin			
REL (USA)	Long-term value: 24 mg/m³, 5 ppm Skin			
TLV (USA)	Long-term value: 97 mg/m³, 20 ppm BEI			
EL (Canada)	Long-term value: 20 ppm			
EV (Canada)	Long-term value: 20 ppm Skin			
LMPE (Mexico)	Long-term value: 20 ppm A3, IBE			
872-50-4 N-me	thyl-2-pyrrolidone			
WEEL (USA)	Long-term value: 10 ppm Skin			
EV (Canada)	Long-term value: 400 mg/m³			
· Ingredients wi	th biological limit values:			
111-76-2 2-but	oxyethanol			
	mg/g creatinine			
	dium: urine			
	e: end of shift			
	ameter: Butoxyacetic acid with hydrolysis			
	thyl-2-pyrrolidone			
BEI (USA) 100				
	dium: urine			
	e: end of shift			
Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone				

- · Additional information: No further relevant information available.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Avoid breathing mist, vapors, or spray.

- Engineering controls: No further relevant information available.
- · Breathing equipment:

Use suitable respiratory protective device when aerosol or mist is formed.

For spills, respiratory protection may be advisable.

NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

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· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

Contact lenses should not be worn.



Safety glasses

- · Body protection: Protective work clothing
- · Limitation and supervision of exposure into the environment

No further relevant information available.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- General Information
- · Appearance:

Form: Liquid

Color: Amber colored

- Odor: Mild

Odor threshold: Not determined.pH-value: Not determined.

· Change in condition

Melting point/Melting range:
Boiling point/Boiling range:

• Flash point:

• Flammability (solid, gaseous):

• Auto-ignition temperature:

• Decomposition temperature:

Undetermined.

100 °C (212 °F)

91 °C (196 °F)

Not applicable.

240 °C (464 °F)

Not determined.

· **Auto igniting:** Product is not self-igniting.

• Danger of explosion: Product does not present an explosion hazard.

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· Explosion limits:

Lower: 1.1 Vol %
Upper: 10.6 Vol %
• Oxidizing properties Non-oxidizing.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

• **Density at 20 °C (68 °F):** 1.02 g/cm³ (8.512 lbs/gal)

Relative density
Vapour density at 20 °C (68 °F)
Evaporation rate
Not determined.
4.1 (Air = 1)
Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

• Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

• Other information No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.

Combustible liquid.

Reacts with strong acids and oxidizing agents.

Reacts with certain metals.

- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides

Sulfur oxides (SOx)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are relevant for classification:						
141-43-5 2-aminoethanol						
Oral	LD50	2050 mg/kg (rat)				
Dermal	LD50	1000 mg/kg (rabbit)				

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		(Contd. of page 8)					
111-76-2 2-butoxyethanol							
Oral	LD50	1480 mg/kg (rat)					
Dermal	LD50	400 mg/kg (rab)					
Inhalative	LC50/4h	450 ppm (rat)					
872-50-4 N-methyl-2-pyrrolidone							
Oral	LD50	3914 mg/kg (rat)					
Dermal	LD50	8000 mg/kg (rabbit)					
27176-87-0 dodecylbenzenesulphonic acid							
Oral	LD50	1150 mg/kg (rat)					

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Additional toxicological information:

Corrosive

The product can cause deformations.

Danger through skin absorption.

- · Carcinogenic categories
- · NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Probable Routes of Exposure

Ingestion.

Inhalation.

Eve contact.

Skin contact.

· Acute effects (acute toxicity, irritation and corrosivity):

Causes severe skin burns and eye damage.

May cause respiratory irritation.

- · Repeated Dose Toxicity: Danger of very serious irreversible effects.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

Repr. 1E

· STOT-single exposure May cause respiratory irritation.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

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- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

UN1760

Corrosive liquids, n.o.s. (Ethanolamine) 1 7 6 0 CORROSIVE LIQ

acid, ETHANOLAMINE)

(dodecylbenzenesulphonic acid, ETHANOLAMINE)

CORROSIVE LIQUID, N.O.S. (dodecylbenzenesulphonic

LIQUID,

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number

· DOT, ADR, IMDG, IATA

· UN proper shipping name

· DOT

· ADR

· IMDG, IATA

· Transport hazard class(es)

· DOT



· Class 8 Corrosive substances

· Label

· ADR



· Class 8 (C9) Corrosive substances

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Trade name: Break-Free Carbon Cutter

· Label 8

(Contd. of page 10)

· IMDG, IATA



· Class 8 Corrosive substances

· Label 8

· Packing group

· DOT, ADR, IMDG, IATA

• Environmental hazards: Not applicable.

Special precautions for user
 Warning: Corrosive substances

Danger code (Kemler):
 EMS Number:
 Segregation groups

80
F-A,S-B
Alkalis

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

• Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· IMDG

· Limited quantities (LQ) 1L

• Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN1760, Corrosive liquids, n.o.s. (Ethanolamine), 8, III

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- · SARA
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

111-76-2 2-butoxyethanol

872-50-4 N-methyl-2-pyrrolidone

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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	(Contd. of page 11)
· Proposition 65 (California)	
· Chemicals known to cause cancer:	
None of the ingredients are listed.	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients are listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
872-50-4 N-methyl-2-pyrrolidone	
Carcinogenic categories	
EPA (Environmental Protection Agency)	_
111-76-2 2-butoxyethanol	NL
· IARC (International Agency for Research on Cancer)	
111-76-2 2-butoxyethanol	3
· TLV (Threshold Limit Value established by ACGIH)	
111-76-2 2-butoxyethanol	A3
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· State Right to Know Listings	
None of the ingredients is listed.	
· Canadian substance listings:	
· Canadian Domestic Substances List (DSL)	
All ingredients are listed.	
· Canadian Ingredient Disclosure list (limit 0.1%)	
None of the ingredients is listed.	
· Canadian Ingredient Disclosure list (limit 1%)	
141-43-5 2-aminoethanol	
111-76-2 2-butoxyethanol	
27176-87-0 dodecylbenzenesulphonic acid	

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of preparation / last revision July 29, 2015 / -

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· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 4: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

Skin Con. 1C. Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Sources

Website, European Chemicals Agency (http://http://echa.europa.eu/)

Website, US EPA Substance Registry Services (http://http://ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, Ammerican Chemical Society (https://www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com