

Printing date June 2, 2015

Reviewed on June 2, 2015

#### 1 Identification

- · Product identifier
- · Trade name: Break-Free Bore Cleaning Foam, BCF-3
- · Article number: BCF-3-1, BCF-3-12 (1008906, 1008907)
- · Recommended use and restriction on use
- · Recommended use: Firearms maintenance
- · 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





GHS02 GHS04 Flame, Gas cylinder

Flam. Aerosol 1 H222 Extremely flammable aerosol.



GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.



GHS08 Health hazard

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



**GHS05** Corrosion

Met. Corr.1 H290 May be corrosive to metals.

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.

· Additional information:

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

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

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- · Label elements
- · GHS label elements

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

· Hazard pictograms











GHS02 GHS04 GHS05 GHS07 GHS08

· Signal word Danger

#### · Hazard-determining components of labeling:

2-aminoethanol

N-methyl-2-pyrrolidone

#### · Hazard statements

H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

#### · Precautionary statements

P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.

P251 Pressurized container: Do not pierce or burn, even after use.
P211 Do not spray on an open flame or other ignition source.

P261 Avoid breathing mist/vapors/spray. P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P234 Keep only in original container.

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

P201 Obtain special instructions before use.

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

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.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 122 °F (50 °C).

P406 Store in corrosive resistant container with a resistant inner liner. P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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

regulations.

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- · Hazard description:
- · WHMIS-symbols:

As of 11 February 2015, the current WHMIS system is being replaced by the GHS system. This is the classifcation under the older system.

B5 - Flammable aerosol

D2A - Very toxic material causing other toxic effects

E - Corrosive material



- · Classification system:
- NFPA ratings (scale 0 4)



Health = 3Fire = 0Reactivity = 3

· HMIS-ratings (scale 0 - 4)



\*3 Health = \*3 ○ Fire = 0

- \* 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.

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· Dangerous components:					
-	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	20-40%			
	N-methyl-2-pyrrolidone Repr. 1B, H360 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 Flam. Liq. 4, H227	<10%			
1 1	isobutane Flam. Gas 1, H220 Press. Gas, H280	<10%			
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74-98-6 propane (Contd. of page 3)

Flam. Gas 1, H220
Press. Gas, H280

#### Additional information:

For the listed ingredients, the identity and exact percentages 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.

Take affected persons out into the fresh air.

#### · After inhalation:

Supply fresh air.

Seek immediate medical advice.

In case of unconsciousness place patient stably in side position for transportation.

#### · After skin contact:

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

### · After eye contact:

Remove contact lenses if worn, if possible.

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

#### · After swallowing:

Unlikely route of exposure.

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

Dizziness

Caustic effect on skin and mucous membranes.

May cause respiratory irritation.

Disorientation

#### · Danger

Danger of gastric perforation.

Causes serious eye damage.

Danger of impaired breathing.

May damage fertility or the unborn child.

#### Indication of any immediate medical attention and special treatment needed

Do not administer preparations of the adrenalin-ephedrine-group.

Medical supervision for at least 48 hours.

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If necessary oxygen respiration treatment.

### 5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

Water spray

Gaseous extinguishing agents

Carbon dioxide

Alcohol resistant foam

- · For safety reasons unsuitable extinguishing agents: None.
- · Special hazards arising from the substance or mixture

Extremely flammable aerosol.

Danger of receptacles bursting because of high vapor pressure if heated.

- · Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information

Eliminate all ignition sources if safe to do so.

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

#### 6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Protect from heat.

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

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

Allow to evaporate.

Absorb liquid components with liquid-binding material.

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

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

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Pressurized container: Do not pierce or burn, even after use.

· Information about protection against explosions and fires:

Keep respiratory protective device available.

Emergency cooling must be available in case of nearby fire.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49

°C, i.e. electric lights. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

- · Information about storage in one common storage facility: Store away from foodstuffs.
- · Further information about storage conditions:

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

· 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-ami	noethanol			
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			
872-50-4 N-met	hyl-2-pyrrolidone			
WEEL (USA)	Long-term value: 10 ppm Skin			
EV (Canada)	Long-term value: 400 mg/m³			
75-28-5 isobuta	75-28-5 isobutane			
TLV (USA)	Short-term value: 2370 mg/m³, 1000 ppm			
EV (Canada)	Long-term value: 800 ppm			
LMPE (Mexico)	Long-term value: 1000 ppm			
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74-98-6 propane							
PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm						
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm						
TLV (USA)	refer to Appendix F						
EL (Canada)	Long-term value: 1000 ppm						
EV (Canada)	Long-term value: 1.000 ppm						
LMPE (Mexico)	Long-term value: 1000 ppm						
Ingredients with biological limit values:							
872-50-4 N-methyl-2-pyrrolidone							
BEI (USA) 100 mg/L							
Medium: urine							
Time: 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.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

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

Suitable respiratory protective device recommended.

Use suitable respiratory protective device when high concentrations are present.

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

· 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.

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· Eye protection:



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:
Color:
Whitish
Odor:
Characteristic
Not determined.

pH-value:
Not determined.

· Change in condition

Melting point/Melting range:
Boiling point/Boiling range:
Not applicable, as aerosol.
Not applicable, as aerosol.
Extremely flammable aerosol.

Flammability (solid, gaseous): Not applicable.
 Auto-ignition temperature: Not determined.
 Decomposition temperature: Not determined.

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

· Danger of explosion: Not determined.

· Explosion limits:

Lower: Not determined. Upper: Not determined. · Oxidizing properties Non-oxidizing. Not determined. · Vapor pressure: · Density: Not determined. · Relative density Not determined. · Vapour density Not determined. · Evaporation rate Not applicable.

· Solubility in / Miscibility with

Water: Fully miscible.

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

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· Viscosity:

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

Other information
 No further relevant information available.

### 10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

Danger of receptacles bursting because of high vapor pressure if heated.

· Possibility of hazardous reactions

Develops readily flammable gases / fumes.

Reacts with oxidizing agents.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.

Extremely flammable aerosol.

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

- · Conditions to avoid Store away from oxidizing agents.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products:

Nitrogen oxides

Carbon monoxide and carbon dioxide

### 11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· Acute to	· Acute toxicity.							
· LD/LC5	· 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)						
	872-50-4 N-methyl-2-pyrrolidone							
Oral	LD50	3914 mg/kg (rat)						
		8000 mg/kg (rabbit)						
D.,	Dulus ame imitant affact.							

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitization: No sensitizing effects known.
- · Subacute to chronic toxicity: No further relevant information available.
- · Additional toxicological information:

Harmful Corrosive

Irritant

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· 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

Inhalation.

Eve contact.

Skin contact.

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

Irritating to respiratory system.

Causes severe skin burns and eye damage.

· Repeated Dose Toxicity:

May cause damage to organs through prolonged or repeated exposure.

May damage fertility or the unborn child.

### 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.
- · 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.

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

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· Recommended cleansing agent: Water, if necessary with cleansing agents.

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### **14 Transport information**

- · UN-Number
- · DOT, ADR, IMDG, IATA UN1950
- · UN proper shipping name
- DOT Aerosols, flammable
   ADR 1950 AEROSOLS
   IMDG, IATA AEROSOLS
- · Transport hazard class(es)
- · DOT



- Class 2.1 • Label 2.1
- · ADR



- Class 2.1 5F • Label 2.1
- · IMDG, IATA



- Class 2.1 • Label 2.1
- · Packing group
- · DOT, ADR, IMDG, IATA
- · Environmental hazards:
- · Marine pollutant: No
- · Special precautions for user Not applicable.
- Danger code (Kemler):EMS Number:21F-D,S-U
- · Transport in bulk according to Annex II of
- MARPOL73/78 and the IBC Code Not applicable.
- · Transport/Additional information:
- · DOT
- **Quantity limitations**On passenger aircraft/rail: 75 kg
  On cargo aircraft only: 150 kg

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· ADR

• Excepted quantities (EQ) Code: E0

Not permitted as Excepted Quantity

· IMDG

Limited quantities (LQ)Excepted quantities (EQ)Code: E0

Not permitted as Excepted Quantity

• UN "Model Regulation": UN1950, Aerosols, 2.1, II

### 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):

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

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65 (California)
- · Chemicals known to cause cancer:

None of the ingredients are listed.

 $\cdot$  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)

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· 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.

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· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

Contact manufacturer.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

141-43-5 2-aminoethanol

· 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 June 2, 2015 / -
- · 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

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas: Gases under pressure: Compressed gas Flam. Liq. 4: Flammable liquids, Hazard Category 4

Met. Corr.1: Corrosive to metals, Hazard Category 1

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 Irrit. 2: 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

SDS Prepared by:

ChemTel Inc.

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Tampa, Florida USA 33602-2902

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Website: www.chemtelinc.com

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