



SAFETY DATA SHEET

CaptiveAire Liquid Fire Suppressant (Fire Extinguishing Agent Pressurized and Non-pressurized)

1. IDENTIFICATION

Product Name	CaptiveAire Liquid Fire Suppressant (Fire Extinguishing Agent, Pressurized and Non-pressurized)
Other Names	Aqueous Potassium Carbonate
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguishing Agent
Restrictions on use	Do not use on electrically energized equipment. Consult applicable fire protection codes.
Company Identification	CaptiveAire Systems, Inc. 4641 Paragon Park Road Raleigh, NC 27616 USA
Customer Information Number	(866) 784-6900
Emergency Telephone Number	
CHEMTREC Number	(800) 4-9300 (703) 7-3887 (International)
Issue Date	February 4, 2019
Supersedes Date	This is the first issue.

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

GHS Classification – Pressurized

Hazard Classification

Serious eye damage/eye irritation: Category 2A
Specific Target Organ Toxicity (STOT) – single exposure: Category 3
Gas under pressure – Compressed gas

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Causes serious eye irritation.
May cause respiratory irritation.
Contents under pressure; may explode if heated.



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2. HAZARD IDENTIFICATION

Precautionary Statements

Prevention

Wash hands thoroughly after handling.
Wear eye protection/face protection.
Avoid breathing mists or spray.
Use only outdoors or in a well-ventilated area.

Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.
If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center or doctor if you feel unwell.

Storage

Store locked up.
Protect from sunlight and store in well-ventilated place.
Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local regulation.

GHS Classification: Non - pressurized

Hazard Classification

Serious eye damage/eye irritation: Category 2A
Specific Target Organ Toxicity (STOT) – single exposure: Category 3

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements

Prevention

Wash hands thoroughly after handling.
Wear eye protection/face protection.
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Response

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2. HAZARD IDENTIFICATION

Storage

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

Possible electrocution hazard if used on electrically energized equipment.

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0%
Acute dermal toxicity	0%
Acute inhalation toxicity	0%
Acute aquatic toxicity	0%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Water	7732-18-5	30 – 60%
Potassium Carbonate	584-08-7	30 – 60%

Note: Pressurized product uses nitrogen as the expellant.

*Exact concentration withheld as trade secret.

4. FIRST- AID MEASURES

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.



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5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical

Pressurized containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

Environmental Precautions

Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Contain and absorb using appropriate inert material and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage

Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Potassium Carbonate

None assigned.

Appropriate engineering controls

Use with adequate ventilation. There should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Individual protection measures

Respiratory Protection

Respiratory protection not normally required. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

Skin Protection

Gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Agent – CaptiveAire Liquid Fire Suppressant

Appearance

	Physical State	Liquid
	Color	Clear
Odor		Odorless
Odor Threshold		No data available
pH		>11
Specific Gravity		~1.4
Boiling Range/Point (°C/F)		108.9°C/228°F
Melting Point (°C/F)		No data available
Flash Point (PMCC) (°C/F)		Not flammable
Vapor Pressure		No data available
Evaporation Rate (BuAc=1)		No data available
Solubility in Water		Soluble
Vapor Density (Air = 1)		Not applicable
VOC (g/l)		None
VOC (%)		None
Partition coefficient (n-octanol/water)		No data available
Viscosity		No data available
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available
Upper explosive limit		Not explosive
Lower explosive limit		Not explosive
Flammability (solid, gas)		Not applicable

Expellant - Nitrogen

Appearance

	Physical State	Compressed gas
	Color	Colorless
Odor		None
Odor Threshold		No data available
pH		Not applicable
Specific Gravity		0.075 lb/ft ³ @70°F as vapor
Boiling Range/Point (°C/F)		-196°C/-321°F
Melting Point (°C/F)		-210°C/-346°F
Flash Point (PMCC) (°C/F)		Not flammable



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9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure	Not applicable
Evaporation Rate (BuAc=1)	Not applicable
Solubility in Water	20 mg/L
Vapor Density (Air = 1)	0.97
VOC (g/l)	Not applicable
VOC (%)	Not applicable
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
Auto-ignition Temperature	Not applicable
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

10. STABILITY AND REACTIVITY

Reactivity

Pressurized containers may rupture or explode if exposed to heat.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Exposure to direct sunlight - contact with incompatible materials

Incompatible Materials

Acids - ammonium compounds - metals - water reactive materials

Hazardous Decomposition Products

Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Potassium Carbonate

Oral LD50 (Rat) >2000 mg/kg

Dermal LD50 (Rabbit) >2000mg/kg

Inhalation LC50 (Rat) >4.96 mg/l

Nitrogen

Simple asphyxiant

Specific Target Organ Toxicity (STOT) – single exposure

Potassium Carbonate: Inhalation can cause respiratory irritation.

Nitrogen: Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.



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11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – repeat exposure

Potassium Carbonate: No relevant studies identified.

Serious Eye damage/Irritation

Potassium Carbonate: Irritating to eyes in animal studies.

Skin Corrosion/Irritation

CaptiveAire Liquid Fire Suppressant: Slightly irritating (Primary Dermal Irritation Study)

Respiratory or Skin Sensitization

Available data indicates this product is not expected to cause skin sensitization.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity

Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity

Potassium Carbonate: No relevant studies identified.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Potassium Carbonate
LC50 Bluegill sunfish 230mg/l 96h
EC50 Daphnia pulex 200mg/l 48h

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the pressurized container. If spilled, expellant will vaporize to the atmosphere.



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14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment. Specific volumes, pressures or hardware configurations containing such materials can dictate various different hazard classifications for transportation and labelling requirements. Under Federal Regulations only trained and qualified individuals are permitted to label and ship products following the applicable Department of Transportation (DOT), Federal Aviation Administration (FAA), Transport Canada (TC), International Maritime Dangerous Goods (IMDG) or International Air Transport Association (IATA) requirements

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization: Pressurized

Serious eye irritation, Specific Target Organ Toxicity – single exposure, Gas under Pressure

SARA Title III Sect. 311/312 Categorization: Non-pressurized

Serious eye irritation, Specific Target Organ Toxicity – single exposure

SARA Title III Sect. 313

This product does not contain any chemicals listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 2

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 2

HMIS Code for Flammability - 0

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS#: Chemical Abstracts Service Number

EC50: Effect Concentration 50%

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available



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16. OTHER INFORMATION

OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: February 4, 2019
Replaces: This is the first issue.
Changes made: Not applicable.

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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