SAFETY DATA SHEET
Regular Dry Chemical
(Fire Extinguishing Agent - Pressurized and Non-pressurized)

1. IDENTIFICATION

Product Name	Regular Dry Chemical (Fire Extinguishing Agent – Pressurized and Non-pressurized)
Other Names	BC, SDC, Sodium Bicarbonate
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguishing Agent
Restrictions on use	Consult applicable fire protection codes
Company Identification	Badger Fire Protection 8767 Seminole Trail, Suite 202 Ruckersville, VA 22968 USA
Customer Information Number	(434)-964-3200
Emergency Telephone Number	
CHEMTREC Number	(800) 424-9300 (703) 527-3887 (International)
Issue Date	February 10, 2017
Supersedes Date	November 23, 2016

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) 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
Gas under pressure – Compressed gas

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Contents under pressure; may explode if heated.

Precautionary Statements
Prevention
None
Response
None

2. HAZARD IDENTIFICATION

Storage
Protect from sunlight.
Store in well-ventilated place.
Disposal
None

GHS Classification: Non - pressurized

Hazard Classification
This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

Label Elements
Hazard Symbols
None

Signal Word: None

Hazard Statements
None

Precautionary Statements

Prevention
None
Response
None
Storage
None
Disposal
None

Other Hazards

Calcium carbonate and mica may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

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

Acute oral toxicity	< 10%
Acute dermal toxicity	< 10%
Acute inhalation toxicity	< 10%
Acute aquatic toxicity	< 10%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: BC, SDC, Sodium Bicarbonate
This product is a mixture.

Component	CAS Number	Concentration
Sodium Bicarbonate	144-55-8	88 - 92%
Calcium Carbonate	471-34-1	4 - 8%
Mica	12001-26-2	1 - 5%
Clay	1332-58-7	< 2%
Amorphous Silica	7631-86-9	< 2%

Note: Pressurized product uses nitrogen, carbon dioxide or compressed air as the expellant.

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.

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 blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized extinguishers 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 cylinder 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
Sweep up or vacuum 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 extinguishers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll extinguishers. Do not drop extinguishers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the extinguisher or plastic container. Store pressurized extinguishers 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.

Mica
ACGIH TLV: 3 mg/m^3 TWA, measured as respirable fraction of the aerosol.
OSHA PEL**:** 20 mppcf, <1% crystalline silica
Calcium Carbonate
OSHA PEL: 15 mg/m^3 TWA, total dust
5 mg/m^3 TWA, respirable fraction
Clay as Kaolin, Respirable Fraction
ACGIH TLV: 2 mg/m^3 TWA
OSHA PEL: 15 mg/m^3 TWA, total dust
5 mg/m^3 TWA, respirable fraction
Nuisance Dust Limit
OSHA PEL: 50 mppcf or 15 mg/m^3 TWA, total dust
15 mppcf or 5 mg/m^3 TWA, respirable fraction

Appropriate engineering controls
Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Individual protection measures
Respiratory Protection
Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded. In oxygen deficient atmospheres, use a self-contained breathing apparatus, as an air purifying respirator will not provide protection.
Skin Protection
Not normally needed when used as a portable fire extinguisher. Use gloves if irritation occurs.
Eye/Face Protection
Chemical goggles or safety glasses with side shields.
Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Non- Pressurized

Appearance	
Physical State	Solid (powder)
Color	White
Odor	Odorless
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	Ca. 2.2
Boiling Range/Point (°C/F)	Not applicable
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	16.4g/100g
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	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	No data available

Expellant

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^{o}F as vapor (Nitrogen) 0.1144 lb/ft^3 (Carbon dioxide gas density)

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range/Point (°C/F)	-196°C/-321 °F(Nitrogen) -78.5 °C /-109.3°F(Carbon Dioxide)
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	838 psig @70°F and 1 atmosphere(Carbon Dioxide)
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	No data available
Vapor Density (Air = 1)	Not applicable
VOC (g/l)	None
VOC (%)	None
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
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 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
Strong oxidizing agents - strong acids

Hazardous Decomposition Products
Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Sodium Bicarbonate:
Oral LD50 (Rat) >4000 mg/kg
Inhalation LC50(rat) >4.74 mg/l
Calcium Carbonate:
Oral LD50 (Rat) >2000 mg/kg
Dermal LD50 (Rabbit) >2000mg/kg
Inhalation LC50(rat) >3.0mg/l

11. TOXICOLOGICAL INFORMATION

Mica:
Oral LD50 (Rat) >2000 mg/kg
Amorphous Silica:
Oral LD50 (Rat) >5000 mg/kg
Dermal LD50 (Rabbit) >2000mg/kg
Clay:
Oral LD50 (Rat) >5000 mg/kg
Dermal LD50 (Rabbit) >5000mg/kg
Nitrogen
Simple asphyxiant
Carbon Dioxide
Simple asphyxiant
LCLo (inhalation in humans): 90,000ppm/ 5 minutes.

Specific Target Organ Toxicity (STOT) – single exposure
Sodium Bicarbonate: Available data indicates this component is not expected to cause target organ effects after a single exposure.
Calcium Carbonate: Available data indicates this component is not expected to cause target organ effects after a single exposure.
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.

Specific Target Organ Toxicity (STOT) – repeat exposure
Sodium Bicarbonate: Available data indicates this component is not expected to cause target organ effects after repeat exposure.
Calcium Carbonate: Available data indicates this component is not expected to cause target organ effects after repeat exposure.

Serious Eye damage/Irritation
Sodium Bicarbonate: Slightly irritating (rabbit)
Calcium Carbonate: Not irritating (rabbit)
Mica: Not irritating (rabbit)

Skin Corrosion/Irritation
Sodium Bicarbonate: Slightly irritating (rabbit)
Calcium Carbonate: Not irritating (rabbit)
Mica: Not irritating (rabbit)

Respiratory or Skin Sensitization
Calcium Carbonate: Non-sensitizing to skin in Mouse local lymph node assay.

Carcinogenicity
Calcium carbonate and mica may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC has classified Silica Dust, Crystalline, in the form of quartz or cristobalite as 1 (carcinogenic to humans).

Germ Cell Mutagenicity
Sodium Bicarbonate: Negative test results in animal studies.
Calcium Carbonate: Negative results in the Mammalian Cell Gene Mutation Assay with and without metabolic activation, Ames test, and In vitro Mammalian Chromosome Aberration Test.

11. TOXICOLOGICAL INFORMATION

Reproductive Toxicity
Sodium Bicarbonate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.
Calcium Carbonate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Sodium Bicarbonate:
LC50 Lepomis macrochirus 7100 mg/l 96h
EC50 Daphnia magna 4100 mg/l 48h

Mobility in soil
Nitrogen occurs naturally in the atmosphere

Persistence/Degradability
Nitrogen occurs naturally in the atmosphere.

Bioaccumulative Potential
Nitrogen occurs naturally in the atmosphere.

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 container. If spilled, nitrogen will vaporize to the atmosphere.

14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment.

Special Precautions for Shipping:
Individuals must be certified as Hazardous Material Shipper for all transportation modes.
Pressurized Fire Extinguishers are considered a hazardous material by the US Department of Transportation and Transport Canada.

DOT CFR 172.101 Data	Fire extinguishers, 2.2, UN1044
UN Proper Shipping Name	Fire extinguishers
UN Class	(2.2)
UN Number	UN1044
UN Packaging Group	Not applicable

14. TRANSPORT INFORMATION

Classification for AIR Transportation (IATA)	Consult current IATA Regulations prior to shipping by air.
Classification for Water Transport IMDG	Consult current IMDG Regulations prior to shipping by water.

When shipping via ground, portable fire extinguishers pressurized to less than 241 psi and of less than 1100 cubic inches in size meet the requirements of "Limited Quantity" as referenced in 49 CFR 173.309 (2010). There is no limited quantity designation for fire extinguishers when shipped by air or water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

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 w/ Nitrogen
Gas under pressure
SARA Title III Sect. 311/312 Categorization: Non-pressurized
None

SARA Title III Sect. 313
This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Health - 1
NFPA Code for Flammability - 0
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards - None

HMIS Ratings
HMIS Code for Health - 1
HMIS Code for Flammability - 0
HMIS Code for Physical Hazard - 0
HMIS Code for Personal Protection - See Section 8
*Chronic

16. OTHER INFORMATION

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
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 10, 2017
Replaces: November 23, 2016
Changes made: Update to Section 3 and 15.

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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