



# SAFETY DATA SHEET

## Karbaloy (Fire Extinguishing Agent Pressurized and Non-pressurized)

### 1. IDENTIFICATION

|                                                         |                                                                                                    |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Product Name                                            | Karbaloy (Fire Extinguishing Agent, Pressurized and Non-pressurized)                               |
| Other Names                                             | Potassium Carbonate, Range Guard System Wet Chemical                                               |
| 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                                  | Badger Fire Protection<br>944 Glenwood Station Lane, Suite 303<br>Charlottesville, VA 22901<br>USA |
| Customer Information Number                             | (434)-964-3200                                                                                     |
| Emergency Telephone Number                              |                                                                                                    |
| CHEMTREC Number                                         | (800) 424-9300<br>(703) 527-3887 (International)                                                   |
| Issue Date                                              | April 10, 2015                                                                                     |
| Supersedes Date                                         | February 9, 2015                                                                                   |

*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**

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



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## 2. HAZARD IDENTIFICATION

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### Hazard Statements

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

### 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.



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### 2. HAZARD IDENTIFICATION

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#### 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.

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%

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a mixture.

| Component           | CAS Number | Concentration |
|---------------------|------------|---------------|
| Water               | 7732-18-5  | 50 – 60%      |
| Potassium Carbonate | 584-08-7   | 40 – 50%      |

**Note:** Pressurized product uses nitrogen as the expellant.

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### 4. FIRST- AID MEASURES

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#### 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.



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#### **4. FIRST- AID MEASURES**

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##### **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**

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##### **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.

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#### **6. ACCIDENTAL RELEASE MEASURES**

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##### **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.



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### 7. HANDLING AND STORAGE

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#### 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

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 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.

#### 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.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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#### Agent - Karboloy

##### 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 |



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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                         |                   |
|-----------------------------------------|-------------------|
| 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                   | No data available |
| Lower explosive limit                   | No data available |
| 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 <sup>3</sup> @70°F as vapor |
| Boiling Range/Point (°C/F)              | -196°C/-321 °F                          |
| Melting Point (°C/F)                    | No data available                       |
| Flash Point (°C/F)                      | Not flammable                           |
| Vapor Pressure                          | No data available                       |
| 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.



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#### 10. STABILITY AND REACTIVITY

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##### 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

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#### 11. TOXICOLOGICAL INFORMATION

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##### 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.

##### 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

Karbaloy: 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.



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#### 11. TOXICOLOGICAL INFORMATION

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##### **Reproductive Toxicity**

Potassium Carbonate: No relevant studies identified.

##### **Aspiration Hazard**

Not an aspiration hazard.

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#### 12. ECOLOGICAL INFORMATION

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##### **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.

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#### 13. DISPOSAL CONSIDERATIONS

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##### **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

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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.

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#### 15. REGULATORY INFORMATION

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##### **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.





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### 15. REGULATORY INFORMATION

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#### 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

Immediate (Acute) Health Hazard, Pressure hazard

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

Immediate (Acute) Health Hazard

#### SARA Title III Sect. 313

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

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### 16. OTHER INFORMATION

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#### 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

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: April 10, 2015

Replaces: February 9, 2015

Changes made: Updated to GHS Classification.



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#### **16. OTHER INFORMATION**

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##### **Information Source and References**

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

**Prepared By:** EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Badger Fire Protection assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

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