1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Karbaloy (Fire Extinguishing Agent)
Other Trade Names: Potassium Carbonate, Range Guard System Wet Chemical
Manufacturer/Supplier: Badger Fire Protection
Address: 4251 Seminole Trail
Charlottesville, VA 22911
USA
Phone Number: (434)-973-4361
Chemtrec Number (for emergencies only): (703) 527-3887 (International)
Revision Date: January 15, 2007
MSDS Date: January 15, 2007

This MSDS has been compiled in accordance with - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)

2. COMPOSITION/INFORMATION ON THE COMPONENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS#/Codes</th>
<th>Concentration</th>
<th>R Phrases</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Carbonate</td>
<td>548-08-7</td>
<td>&gt;40%</td>
<td>R36/37/38</td>
<td>Xn</td>
</tr>
<tr>
<td></td>
<td>EC#2095293</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt;60%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>EC#2317912</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARD IDENTIFICATION

EU Main Hazards
Irritating to eyes, respiratory system and skin.

Routes of Entry
- Eye contact - Inhalation - Skin contact

Carcinogenic Status
Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs
- Respiratory System - Skin - Eye

Health Effects - Eyes
Contact for short periods of time may cause irritation. Prolonged contact can cause severe irritation and eye damage.

Health Effects - Skin
Contact may cause mild irritation. Prolonged contact can cause chemical burns.

Health Effects - Ingestion
Ingestion may cause severe irritation, vomiting and chemical burns.

Health Effects - Inhalation
May cause irritation of the respiratory tract and coughing.
4. FIRST AID MEASURES

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

**Skin**
Wash affected area 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.

**Advice to Physicians**
Treat symptomatically.

5. FIRE FIGHTING MEASURES

**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 all pressurized containers and jugs and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

**Unusual Fire and Explosion Hazards**
Pressurized containers may explode in heat of fire.

**Protective Equipment for Fire-Fighting**
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Contain and absorb using appropriate inert material. Transfer into suitable containers for disposal. Prevent skin and eye contact. Wear appropriate protective equipment. Prevent the material from entering drains or watercourses.

7. HANDLING AND STORAGE

Pressurized containers and jugs should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll containers. Do not drop containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the container. Store 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

Occupational Exposure Standards
Occupational exposure limits are listed below, if they exist.

**Potassium Carbonate**
None established

Engineering Control Measures
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.

Respiratory Protection
Not normally required.

Hand Protection
Use rubber gloves when handling the preparation.

Eye Protection
Chemical goggles or safety glasses with side shields.

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH</td>
<td>&gt;11</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>~1.4</td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>108.9°C/228°F</td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>Not Flammable</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Conditions to Avoid
- Heat - High temperatures - Exposure to direct sunlight

Materials to Avoid
- acids – ammonium compounds - metals
10. **STABILITY AND REACTIVITY**

   **Hazardous Polymerization**
   Will not occur.

   **Hazardous Decomposition Products**
   - oxides of carbon

11. **TOXICOLOGICAL INFORMATION**

   **Acute Toxicity**
   Low order of acute toxicity.
   Potassium Carbonate: Oral LD50 (rat): 1870 mg/kg

   **Chronic Toxicity/Carcinogenicity**
   This product is not expected to cause long term adverse health effects.

   **Genotoxicity**
   This product is not expected to cause any mutagenic effects.

   **Reproductive/Developmental Toxicity**
   This product is not expected to cause adverse reproductive effects.

12. **ECOLOGICAL INFORMATION**

   **Mobility**
   No relevant studies identified.

   **Persistence/Degradability**
   No relevant studies identified.

   **Bio-accumulation**
   No relevant studies identified.

   **Ecotoxicity**
   No relevant studies identified.

13. **DISPOSAL**

    Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. No harm to the environment is expected from this preparation.

14. **TRANSPORT INFORMATION**

    **DOT CFR 172.101 Data**
    Not regulated

    **UN Proper Shipping Name**
    Not regulated

    **UN Class**
    None

    **UN Number**
    None

    **UN Packaging Group**
    None
15. REGULATORY INFORMATION

**EU Label Information**
Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

**EU Hazard Symbol and Indication of Danger.**
- Xi - Irritant

**R phrases**
- R36/37/38 - Irritating to eyes, respiratory system and skin.

**S phrases**
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36 Wear suitable protective clothing.

**US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS**

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

**EINECS Listing**
All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.

**DSL/NDSL (Canadian) Listing**
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.

**WHMIS Classification**
D2B
This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

**MA Right To Know Law**
All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimus concentration include: none

**PA Right To Know Law**
This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: none

**NJ Right To Know Law**
This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: none

**California Proposition 65**
This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

**SARA Title III Sect. 302 (EHS)**
This product does not contain any chemicals subject to SARA Title III Section 302.

**SARA Title III Sect. 304**
This product does not contain any chemicals subject to SARA Title III Section 304.
15. REGULATORY INFORMATION

SARA Title III Sect. 311/312 Categorization
- 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.

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 Reactivity - 0
HMIS Code for Personal Protection - See Section 8

Abbreviations
N/A: Denotes no applicable information found or available
CAS#: Chemical Abstracts Service Number
ACGIH: American Conference of Governmental Industrial Hygienists
OSHA: Occupational Safety and Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
NTP: National Toxicology Program
IARC: International Agency for Research on Cancer
R: Risk
S: Safety

Prepared By: EnviroNet LLC.
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