

STEEL FIRE EQUIPMENT LTD

150 Superior Blvd.
Mississauga, Ontario
L5T 2L2

MATERIAL SAFETY DATA SHEET

Prepared to US OSHA, CMA, ANSI and Canadian WHMIS Standards

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME (AS LABELED): PURPLE K DRY CHEMICAL
SYNONYMS: Potassium Bicarbonate, KDC, PK
MANUFACTURER'S NAME: STEEL FIRE EQUIPMENT LTD.
ADDRESS: 150 Superior Blvd
Mississauga, Ontario
L5T 2L2
BUSINESS PHONE: 905.564.1500
INTERNET ADDRESS: www.steelfire.com
DATE OF PREPARATION: January 1st, 2009

SECTION 2: HAZARD IDENTIFICATION AND EMERGENCY OVERVIEW

Emergency overview: Light purple, fine solid powder, odorless.

Adverse health effects and symptoms: Moderate irritant to the respiratory system and eyes; mild irritant to the skin. Symptoms may include coughing, shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely, may cause gastric distress.

Exposure guidelines:

Ingredients	OSHA PEL	ACGIH TLV	DFG MAK *
Potassium bicarbonate	PNOC** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³
Mica	6 mg/m ³	3 mg/m ³	-----
Attapulgite clay (1-10% quartz)	PNOC Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³
Silicone oil	NR***	NR	NR
Violet 23 pigment	NR	NR	NR

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Hazard symbols: WHMIS (Canadian workplace hazardous materials identification system)

D2B may irritate eyes, mucous membranes, or skin

SECTION 3. COMPOSITION INFORMATION ON INGREDIENTS

Name/Compound	Weight %	CAS #
Potassium bicarbonate (potassium hydrogen carbonate)- may contain minor calcium	93	298-14-6
Attapulgitic clay or Fullers earth magnesium aluminum silicate- 1-10% crystalline silica	4	12174-11-7 14808-60-7
Mica potassium aluminum silicate	2	12001-26-2
Silicone oil methyl hydrogen polysiloxane	< 0.5	63148-57-2
Violet 23 pigment oxazine dye	< 0.2	6358-30-1

SECTION 4. FIRST AID MEASURES

Eye Exposure: Irrigate eyes at eye wash station and repeat until pain free. Seek medical attention if irritation develops or persists, or if visual changes occur.

Skin Exposure: In case of contact, wash with plenty of soap and water. Seek medical attention if irritation develops or persists.
Inhalation: If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.

Medical conditions possibly aggravated by exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing media: non combustible and non flammable – product is an extinguishing agent

Unusual fire/explosion hazards: in a fire this material may decompose, releasing oxides of carbon, potassium and nitrogen (see Section 10).

Insensitive to mechanical impact or static discharge.

HMIS Hazard Ranking:

health = 1, flammability = 0, reactivity = 0, personal protective equipment: use N-95 dust mask (see Section 8)

SECTION 6. ACCIDENTAL RELEASE MEASURES

Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Wear appropriate respiratory protection. Bag and drum for disposal. If product is used and/or contaminated, use PPE and containment appropriate to the nature of the mixture. Prevent material from entering waterways.

SECTION 7. HANDLING AND STORAGE

Avoid skin, eye, or respiratory exposure. Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8). Keep product in original container or extinguisher. Contents may be under pressure – inspect for extinguisher rust periodically to insure container integrity. Do not mix with other extinguishing agents, particularly ammonium phosphate. Do not store in high humidity.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

During the application of this product against fires, exhaust gases and the products of incomplete combustion (PICs) are the principal respiratory hazards. In the manufacture of extinguishers, automated systems and point source ventilation controls sufficiently minimize respiratory exposure. Employers and employees must use their collective judgment in determining occupational settings where the use of a dust mask or air purifying respirator is prudent. The need for respiratory protection is not likely for short-term use in well ventilated areas.

Respiratory protection: use N95 dust mask for limited exposure, use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure.

Eye protection: wear chemical goggles or full-face APR.

Skin protection: use nitrile, latex, or similar gloves and coveralls. Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: light purple powder, finely divided odorless solid. Specific gravity: ~ 2.16

Solubility: product is coated, not immediately soluble in water

Non-flammable

Flash point: none

Vapor pressure: < 1 mm Hg

pH: approximately 9 – 10 for a 10% solution

Boiling point: not applicable

No explosive or oxidizing properties

SECTION 10. STABILITY AND REACTIVITY

Stability: stable

Incompatibles: strong acids, ammonium phosphate, lithium.

Decomposition products: heat of fire may release carbon monoxide, carbon dioxide, and oxides of potassium and nitrogen.

Possibility of hazardous reactions: none

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Potassium bicarbonate LD₅₀ (rat): unknown, testing has not been conducted. Relatively non-toxic.

Target organs in man: respiratory system. This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Chronic toxicity: Pneumoconiosis, or "dusty lung" disease, may result from chronic exposure to any dust.

Reproductive toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: negative effects unknown. Provides nutrient phosphorus to plant life.

Persistence / Degradability: degrades rapidly in humid/wet environment

Bioaccumulation: extent unknown

Mobility in soil: water soluble, may leach to groundwater

SECTION 13. DISPOSAL CONSIDERATIONS

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

SECTION 14. TRANSPORTATION INFORMATION

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

SECTION 15. REGULATORY INFORMATION

International Inventory Status:

All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

European Risk and Safety phrases:

EU Classification: Irritant

R Phrases:	20	Harmful by inhalation.
	36/37	Irritating to eyes, respiratory system.
S Phrases:	22	Do not breathe dust.
	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

U.S. federal regulatory information:

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

State regulatory information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None
 California - Permissible Exposure Limits for Chemical Contaminants: None
 Florida - Substance List: Mica Dust Illinois - Toxic Substance List: None Kansas - Section 302/303 List: None
 Massachusetts - Substance List: Mica Dust
 Minnesota - List of Hazardous Substances: None
 Missouri - Employer Information/Toxic Substance List: None
 New Jersey - Right to Know Hazardous Substance List: None
 North Dakota - List of Hazardous Chemicals, Reportable Quantities: None
 Pennsylvania - Hazardous Substance List: None Rhode Island - Hazardous Substance List: Mica Dust Texas - Hazardous Substance List: No
 West Virginia - Hazardous Substance List: None
 Wisconsin - Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

SECTION 16. OTHER INFORMATION

This MSDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Steel Fire Equipment Ltd. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Steel Fire Equipment Ltd. assumes no responsibility for injury to the vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore vendee assumes the risk in his use of the material.