FlameStop

SAFETY DATA SHEET

REVISED EDITION NO: **5**
DATE: **25 / 07 / 2024**
SUPERSEDES: **15 / 07 / 2019**

FlameStop NSW (Head Office)
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SECTION 1 - IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

PRODUCT IDENTIFIER:

FLAMESTOP PURPLE K DRY CHEMICAL

OTHER MEANS OF IDENTIFICATION:

POTASSIUM BICARBONATE, KDC, PK

EBEPURPLEK DRY CHEMICAL EXTINGUISHING AGENT PURPLE K POWDER 22.7KG DRUM

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Relevant identified uses: fire suppression

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

Supplier:	FlameStop
Street:	13 Chaplin Drive
Postal code/city:	LANE COVE WEST, NSW, 2066
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PREPARED IN ACCORDANCE WITH THE NATIONAL CODE OF PRACTICE FOR THE PREPARATION OF MATERIAL SAFETY DATA SHEETS 2ND EDITION [NOHSC:2011(2003)]

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Classification according to UNECE GHS (Rev.7) (2017)

Classified as dangerous - Serious eye damage / eye irritation - Category 2B

LABEL ELEMENTS:

Hazard pictograms	Not applicable for this classification
Pictogram name	Not applicable for this classification
Signal word	**WARNING**
Hazard statements	
Physical Hazards	
Health Hazards	**H320** Causes eye irritation.
Environmental Hazards	
Combinations	
Precautionary statements	
General	**P264** Wash thoroughly after handling.
Prevention	
Response	**P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P337+P313** IF eye irritation persists: Get medical advice/attention.
Storage	
Disposal	

OTHER HAZARDS:

Burning may product irritating, toxic and obnoxious fumes. Avoid dust formation. If dusts are formed, dusts may be irritating to the eyes, skin and respiratory tract. May cause gastrointestinal irritation. If fine airborne dusts are generated and inhaled, product presents a possible cancer hazard.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURE INGREDIENTS

Chemical Name	Common Name & Synonyms	Cas #	Concentration (%% by weight)
Potassium Bicarbonate	Potassium hydrogen-carbonate	298-14-6	93.22
Crystalline silica, quartz	Quartz silica Crystallized silicon dioxide	14808-60-7	0.042 - 0.42

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

After inhalation

If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. Get medical attention if irritation develops and persists.

After skin contact

Wash with plenty of water. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, seek medical attention.

After ingestion

Do not induce vomiting. Never give anything by mouth to a person who is unconscious or convulsions. Get medical attention if irritation develops and persists.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE, DELAYED AND AGGRAVATED

Causes eye irritation. Direct eye contact may cause slight or mile, transient irritation. Symptoms may include; tearing, redness and discomfort. Dust may irritate respiratory system. May cause coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea vomiting and diarrhoea. Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness. Avoid dust formation. If fine airborne dusts are generated and inhaled, product presents a possible cancer hazard.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes to Physician: Provide general supportive measures and treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable extinguishing media

Use media suitable to the surrounding fire, such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Not considered flammable. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Burning may produce irritating, toxic and obnoxious fumes.

SECTION 5: FIREFIGHTING MEASURES

FLAMMABILITY CLASSIFICATION

Not classed as flammable.

HAZARDOUS COMBUSTION PRODUCTS

Carbon oxides; Potassium oxides; Silicon oxides; Nitrogen oxides; irritating fumes and smoke.

ADVICE FOR FIREFIGHTERS

Protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special firefighting procedures

Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses. Dike for water control.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

ENVIRONMENTAL PRECAUTIONS

Prevent product from entering drains, sewers, waterways and soil.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use inert, non-combustible absorbents to assist the pick up of material. Pick up and transfer to properly labelled containers. Contaminated absorbent materials may pose the same hazards as the spilled product. Contact the proper local authorities. For waste disposal, see section 13.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing dust and fume. Avoid and control operations which create high vapour or dust concentrations. Avoid contact with skin, eyes and clothing. Protect from moisture. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Empty containers retain material residue.

CONDITIONS FOR SAFE STORAGE

Store in cool/well-ventilated place. Keep only in original container. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leans. Keep away from incompatibles.

INCOMPATIBLE MATERIALS

Strong oxidizing agents; Strong acids; Strong Bases.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits				
Chemical Name	**ACGIH TLV**		**OSHA PEL**	
	TWA	**STEL**	**PEL**	**STEL**
Potassium bicarbonate	N/Av	N/Av	N/Av	N/Av
Crystalline silica, quartz	0.25 mg/m3 (respirable)	N/Av	0.1 mg/m3 (respirable) (final rule limit)	N/Av

EXPOSURE CONTROLS

Ventilation and Engineering measures

Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH approved respirators. Respirators should be selected based on the form and concentration of contaminates in air. Advice should be sought from respiratory protection specialists.

Skin protection

Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear sufficient clothing to prevent skin contact.

Eye / face protection

Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields.

Other protective equipment

Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance **- Physical state:** **- Colour:**	 Solid - Powder Lavender / Purple
Odour:	Odourless
Odour threshold:	N / Av
pH:	Approximately 9-10 for a 10% solution
Melting/freezing point (°C):	100-120°C (212-248°F) Potassium Bicarbonate
Boiling point/boiling range (°C):	N / Av
Flash Point	N / Ap
Flashpoint (Method)	N / Ap
Evaporation Rate (BuAe = 1)	N / Av
Flammability (solid, gas)	Not considered flammable.
Lower flammable limit (% by vol.)	N / Ap
Upper flammable limit (% by vol.)	N / Ap
Oxidizing properties	None Known
Explosive properties	Not explosive
Vapour pressure	1mm Hg
Vapour density	N / Av
Relative density / Specific gravity	2.16
Solubility in water	Insoluble
Other solubility(ies)	N / Av
Partition coefficient: n-octanol/water or Coefficient or water/oil distribution	N / Av
Auto-ignition temperature	N / Av
Decomposition temperature	100 - 120°C (212 -248°F) Potassium Bicarbonate
Viscosity	N / Av
Volatiles (% by weight)	N / Av
Volatile organic Compounds (VOC's)	N / Av
Absolute pressure of container	N / Ap
Flame projection length	No data available
Other physical/chemical comments	No additional information.

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY

The product is stable and non-reactive under normal conditions of use, storage and transport

CHEMICAL STABILITY

Stable under normal conditions

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization does not occur.

CONDITIONS TO AVOID

Protect from moisture. Avoid contact with incompatible materials.

INCOMPATIBLE MATERIALS

Strong oxidizing agents. Strong acids. Strong Bases**.**

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon oxides. Potassium oxides. Silicon oxides. Refer also to hazardous combustion products, Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

INFORMATION ON POSSIBLE ROUTES OF EXPOSURE

Routes of entry inhalation	YES
Routes of entry skin & eye	YES
Routes of entry Ingestion	YES
Routes of exposure skin absorption	NO

POTENTIAL HEALTH EFFECTS

Signs and symptoms of short-term (acute) exposure

Inhalation	Mild respiratory irritant. Symptoms may include coughing and sneezing
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea
Skin	Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.
Eyes	Causes eye irritation. Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.

Potential Chronic Health Effects

Prolonged or repeated inhalation of dusts may cause lung decease. Contains crystalline silica; prolonged exposure by inhalation of particles can cause serious lung damage, including silicosis.

SECTION 11 - TOXICOLOGICAL INFORMATION (CONTINUED)

Mutagenicity

No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic

Carcinogenicity

No component of this product present at levels greater than, or equal to, 0.1% is identified are a carcinogen or potential carcinogen by ACGIH, IARC, OSHA, or NTP.

Reproductive effects & Teratogenicity

This product is not expected to cause reproductive or developmental effects.

Sensitization to Material

Not expected to be a skin or respiratory sensitizer

Specific target organ effects

According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through single or repeated exposures.

Medical conditions aggravated by overexposure

Pre-existing skin, eye and respiratory disorders

Synergistic materials

None known or reported by the manufacturer

Toxicological data

Not classified for acute toxicity based on available data.

There is no available data for the product itself, only the ingredients. See below for individual ingredient acute toxicity data.

Chemical Name	LC_{50}(4hr)	LC_{50}	
	inh, rat	(Oral, Rat)	(Rabbit, dermal)
Potassium bicarbonate	>4.88 ng/L (4.5hours) (dust) (mortality)	>2000 mg/kg (No mortality)	>2000 mg/kg (No mortality)
Crystalline silica, quartz	N /Av	N / Av	N / Av

Other important toxicological hazards

None known or reported by the manufacturer.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY

No data is available on the product itself. The product should not be allowed to enter drains or watercourses, or be deposited where it can affect ground or surface waters. Not classified for hazards to the environment. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity Tables

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Potassium bicarbonate	298-14-6	1300 mg/L (Rainbow trout)	N / Av	None
Crystalline silica, quarts	14808-60-70	N / Av	N / Av	None

SECTION 12 - ECOLOGICAL INFORMATION

Ingredients	CAS No	Toxicity to Daphnia		
		LC50 / 96h	NOEC / 21 day	M Factor
Potassium bicarbonate	298-14-6	1360 mg/L Ceriodaphina (water flea)	N / Av	None
Crystalline silica, quarts	14808-60-70	N / Av	N / Av	None

Ingredients	CAS No	Toxicity to Algae		
		LC50 / 96h	NOEC / 21 day	M Factor
Potassium bicarbonate	298-14-6	N / Av	N / Av	None
Crystalline silica, quarts	14808-60-70	N / Av	N / Av	None

Persistence and degradability

The product itself has not been tested. Contains: Inorganic substances in powdered form. The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation potential

The product itself has not been tested. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Potassium bicarbonate (CAS 298-14-6)	N / Ap	N / Ap
Crystalline silica, quartz (CAS 14808-60-7)	N / Ap	N / Ap

Mobility in soil

The product itself has not been tested.

Other Adverse Environmental effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 - DISPOSABLE CONSIDERATIONS

HANDLING FOR DISPOSAL

Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in section 7 and 8. This material and its container must be disposed of in a safe way. Empty containers retain residue. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

METHODS OF DISPOSAL

Dispose in accordance with all applicable federal, state, provincial and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Land transport (ADR/RID)

Not classified for this carrier.

Marine transport (IMDG)

Not classified for this carrier.

Air transport (ICAO)

Not classified for this carrier.

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated	Not Regulated	None	
49CFR/DOT Additional Information	None.				
TDG	None.	Not regulated	Not Regulated	None	
TDG Additional Information	None.				

Special precautions for user

Appropriate advice on safety must accompany the package.

Environmental hazards

This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex 11 of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15 - REGULATORY INFORMATION

International Information

Components listed below are present on the following International Inventory list.

Ingredients	CAS #	European EINECS	Australian AICS	Philippines PICS	Japan ENCS	Korea KECI / KECL	China IECSC	New Zealand IOC
Potassium bicarbonate	298-14-6	206-059-0	Present	Present	(1)-153	KE-29127	Present	May be used as a single component chemical under an appropriate group standard.
Crystalline silica, quartz	14808-60-7	238-878-4	Present	Present	(1)-548	KE-29983	Present	HSR0033125

SECTION 15 - REGULATORY INFORMATION (CONTINUED)

US Federal Information

Components listed below are present on the following U.S. Federal chemical lists

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RW) (40 CFR 117.302)	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355	SARA TITLE: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Potassium bicarbonate	298-14-6	Yes	N / Ap	N / Ap	No	N / Ap
Crystalline silica, quartz	14808-60-7	Yes	N / Ap	N / Ap	No	N / Ap

SARA TITLE III: Sec 311 and 312 SDS Requirements, 40 CFR 370 Hazard Classes: Not a hazard under normal conditions of use. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds, or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws

The following chemicals are specifically listed by individual States.

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Potassium bicarbonate	298-14-6	No	N / Ap	No	No	No	No	No	No
Crystalline silica, quartz	14808-60-7	Yes	Cancer (airborne particles of respirable sizes)	No	Yes	Yes	Yes	Yes	Yes

Canadian Information

Canadian Environmental Protection Act (CEPA information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product does not contain any substances listed on the NPRI.

WHMIS information: Refer to Section 2 for a WHMIS Classification on this product.

SECTION 16 - OTHER INFORMATION

HANDLING FOR DISPOSAL

ACGIH: American Conference of Governmental Industry Hygienists

AICS: Australian Inventory of Chemical Substances

CA: California

CAS: Chemical Abstract Services

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CFR: Code of Federal Regulations

CSA: Canadian Standards of Association

DOT: Department of Transportation

EC50: Effective Concentration 50%

EINECS: European Inventory of Existing Commercial chemical Substances

ENCS: Existing and New Chemical Substances

EPA: Environmental Protection Agency

HSDB: Hazardous Substances Data Bank

IARC: International Agency for Research on Cancer

IECSC: Inventory of Existing Chemical Substances

IOC: Inventory of Chemicals

KECI: Korean Existing Chemicals Inventory

KECL: Korean Existing Chemicals List

LC: Lethal Concentration

LD: Lethal Dose

MA: Massachusetts

MPPCF: Million Particles Per Cubic Foot

MN: Minnesota

N / Ap: Not Applicable

N / AV: Not Avaliable

NIOSH: National Institute of Occupational Safety and Health

NJ: New Jersey
NL: Not Listed
NOEC: No Observable Effect Concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Heath Administration
PA: Pennsylvania
PEL: Permissible Exposure Limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conversation and Recover Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act and Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

REFERENCES

UNECE GHS (Rev.7) (2017)
ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016
International Agency for Research on Cancer Monographs, searched 2017
Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2017(Chempendium, HSDB and RTECs).
Material Safety Data Sheets from manufacturer.
US EPA Title III List of Lists - 2017 version.
California Proposition 65 List - 2017 version.
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2017.

OTHER SPECIAL CONSIDERATIONS FOR HANDLING

Provide adequate information, instruction and training for operators.

HMIS Rating

*- Chronic Hazard	0 - Minimal	1 - Slight	2 - Moderate	3 - Series	4 - Severe
Health: 1	Flammability: 0	Reactivity: 0			

NFPA Rating

0 - Minimal	1 - Slight	2 - Moderate	3 - Series	4 - Severe
Health: 1	Flammability: 0	Instability: 0	Special Hazards:	

DISCLAIMER

The information is based on the best knowledge of FlameStop Pty Ltd and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

Please refer to our internet website for more information: www.flamestop.com.au

SDS sheets are available to download in the downloads section of our website.

For contact information please go to page 1 of this SDS.

END OF SDS.