



# Safety Data Sheet

## Black Widow Dry Chemical Fire Extinguishant



### 1. Identification

<b>Product identifier</b>	Black Widow Dry Chemical Fire Extinguishant
<b>Product code</b>	723190
<b>Other means of identification</b>	None.
<b>Recommended use of the chemical and restrictions on use</b>	Fire Extinguishing Powder.
<b>Manufacturer</b>	Firetrace Aerospace, LLC 8435 N. 90th Street, Suite 2 Scottsdale, AZ 85258 Tel. 480-607-2709 (7am - 4pm) Fax 1-480-315-1316 <a href="http://www.ftaero.com">www.ftaero.com</a> <a href="mailto:info@ftaero.com">info@ftaero.com</a>
<b>Emergency phone number</b>	1-800-662-2927 (US & CA toll free)

### 2. Hazard identification

<b>Summary</b>	Avoid breathing dust. Use in a manner that avoids generating dust. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
<b>WHMIS 2015/OSHA HCS 2012/GHS</b>	
<b>Not Regulated under WHMIS 2015/GHS</b>	
P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use. P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.	

### 3. Composition/information on ingredients

Common name	CAS	Weight % content
Potassium carbamoylcarbamate	26479-35-6	50 - 70 %
Triiron tetraoxide	1317-61-9	27 - 30 %
Iron (III) Oxide	1309-37-1	27 - 30 %
Amorphous silica	7631-86-9	2 - 4 %
Mica	12001-26-2	1 - 3 %
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	0.1 - 1 %

## 4. First-aid measures

<b>Inhalation</b>	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
<b>Skin contact</b>	Wash skin with warm water and mild soap. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention.
<b>Eye contact</b>	IMMEDIATELY flush with plenty of water. Remove contact lenses. Flush with water for at least 15 minutes. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.
<b>Ingestion</b>	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water. Never give anything by mouth if victim is unconscious or convulsing. If a problem develops or persists, seek medical attention.
<b>Other</b>	No information available.
<b>Symptoms</b>	Dust and powder can irritate the eye, skin and respiratory tracts.
<b>Notes to the physician</b>	Treat symptomatically. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use appropriate extinguisher for surrounding fire.
<b>Specific hazards arising from the chemical</b>	This product is used to contain fires.
<b>Special protective equipment</b>	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
<b>Special protective actions for fire-fighters</b>	No information available for this product.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
<b>Environmental precautions</b>	Not hazardous for the environment.
<b>Methods and materials for containment and cleaning up</b>	Ventilate the area well. Vacuum or sweep up dust and place in an appropriate waste disposal container. Avoid generating dusty conditions. Dispose via a licensed waste disposal contractor.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Use only in well ventilated area. Avoid breathing dust. Use in a manner that avoids generating dust. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions. Do not eat, do not drink and do not smoke
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during use. Keep containers tightly closed when not used. After use, wash hands with soap and water. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities** Store tightly close and in properly labelled container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials (see section 10).

**Storage temperature** 0 to 50°C (32 to 122°F)

## 8. Exposure controls/personal protection

**Immediately Dangerous to Life or Health** Amorphous silica: 3000 mg/m<sup>3</sup>.  
Iron (III) Oxide: 2500 mg/m<sup>3</sup>, value as iron.  
Triiron tetraoxide: 2500 mg/m<sup>3</sup>, value as iron.

Iron (III) Oxide	TWA (8h)	Respirable Dust	5 mg/m <sup>3</sup>	AB , ACGIH, BC, ON, RSST
		Fume and Dust	10 mg/m <sup>3</sup>	OSHA
Triiron tetraoxide	TWA (8h)	Respirable Dust	5 ppm	ACGIH , BC, ON
		Total Dust	10 ppm	RSST
Amorphous silica	TWA (8h)	Respirable Dust	3 mg/m <sup>3</sup>	ACGIH , BC
		Respirable Dust	5 mg/m <sup>3</sup>	OSHA
		Respirable Dust	6 mg/m <sup>3</sup>	RSST
		Total Dust	10 mg/m <sup>3</sup>	ACGIH , BC, ON
		Total Dust	15 mg/m <sup>3</sup>	OSHA
Mica	TWA (8h)		0.7 f/cc	OSHA
		Respirable Dust	3 mg/m <sup>3</sup>	ACGIH , BC, ON, RSST
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	TWA (8h)	Inhalable Fraction	3 mg/m <sup>3</sup>	ACGIH
		Total Dust	10 mg/m <sup>3</sup>	ACGIH

**Appropriate engineering controls** Provide sufficient mechanical (general and/or local exhaust) to keep the airborne concentrations of dust below their respective occupational exposure limits.

### Individual protection measures

**Eye** Wear safety glasses. If risk of contact with eyes wear chemical splash goggles.

**Hands** In case of prolonged contact wear neoprene or nitrile gloves. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear.

**Skin** Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code.

**Respiratory** Respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. For nuisance exposures use type N95 particle respirator.

<b>Feet</b>	Wear safety shoes.
 Safety glasses    Nitrile gloves	

## 9. Physical and chemical properties

<b>Physical state</b>	Solid powder	<b>Flammability</b>	Non-flammable.
<b>Colour</b>	Grey	<b>Flammability limits</b>	N/Ap.
<b>Odour</b>	Ammonia	<b>Flash point</b>	N/Ap.
<b>Odour threshold</b>	N/Av.	<b>Auto-ignition temperature</b>	N/Ap.
<b>pH</b>	8.0 to 9.0	<b>Sensibility to electrostatic charges</b>	N/Av.
<b>Melting point</b>	N/Av.	<b>Sensibility to sparks and/or friction</b>	N/Av.
<b>Freezing point</b>	N/Av.	<b>Vapour density</b>	N/Ap. (Air = 1)
<b>Boiling point</b>	N/Ap.	<b>Relative density</b>	>1 kg/L (Water = 1)
<b>Solubility</b>	Partially soluble in water.	<b>Partition coefficient n-octanol/water</b>	N/Ap.
<b>Evaporation rate</b>	N/Ap.	<b>Decomposition temperature</b>	N/Av.
<b>Vapour pressure</b>	N/Ap.	<b>Viscosity</b>	N/Ap.
<b>Percent Volatile</b>	0%	<b>Molecular mass</b>	N/Ap.

N/Av.: Not Available    N/Ap.: Not Applicable    Und.: Undetermined    N/E: Not Established

## 10. Stability and reactivity

<b>Reactivity</b>	No information available for this product.
<b>Chemical stability</b>	Stable under normal conditions of use.
<b>Possibility of hazardous reactions (including polymerizations)</b>	Hazardous polymerization will not occur under recommended storage.
<b>Conditions to avoid</b>	Avoid contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.


## 11. Toxicological information

<b>Numerical measures of toxicity</b>	<p>Potassium carbamoylcarbamate</p> <p>Triiron tetraoxide</p> <p>Iron (III) Oxide</p> <p>Amorphous silica</p> <p>Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica</p>	<p>Ingestion &gt;2000 mg/kg Rat LD50</p> <p>Inhalation &gt;2.26 mg/l/4h Rat LC50</p> <p>Skin &gt;2000 mg/kg Rat LD50</p> <p>Ingestion &gt;5000 mg/kg Rat LD50</p> <p>Skin &gt;2000 mg/kg Rabbit LD50 &gt;10000</p> <p>Ingestion mg/kg Rat LD50</p> <p>Skin &gt;2000 mg/kg Rabbit LD50</p> <p>Ingestion &gt;3300 mg/kg Rat LD50</p> <p>Inhalation &gt;2 mg/l/4h Rat LC50</p> <p>Skin &gt;5000 mg/kg Rabbit LD50</p> <p>Ingestion &gt;5000 mg/kg Rat LD50</p> <p>Skin &gt;2000 mg/kg Rat LD50</p>									
<b>Likely routes of exposure</b>	<p>Inhalation.</p>										
<b>Delayed, immediate and chronic effects</b>	<p><b>Eye contact</b></p> <p><b>Skin contact</b></p> <p><b>Inhalation</b></p> <p><b>Ingestion</b></p> <p><b>Respiratory or skin sensitization</b></p> <p><b>IARC/NTP Classification</b></p> <p><b>Carcinogenicity</b></p> <p><b>Mutagenicity</b></p> <p><b>Reproductive toxicity</b></p> <p><b>Specific target organ toxicity - single exposure</b></p> <p><b>Specific target organ toxicity - repeated exposure</b></p>	<p>May cause redness and irritation to eyes. Eye Irritation/Corrosion, Rabbit: tests performed with each ingredient of this mixture gave not irritating to slightly irritating results. The mechanical friction can increase eyes irritation.</p> <p>May cause redness and irritation of the skin. Skin Irritation/Corrosion, Rabbit : tests performed with each ingredient of this mixture gave not irritating to slightly irritating results. The mechanical friction can increase skin irritation.</p> <p>Overexposure may cause respiratory tract irritation.</p> <p>Low degree of acute toxicity. Ingestion of large quantities may cause gastrointestinal irritation.</p> <p>Ingredients present at levels greater than or equal to 0.1% of this product are skin or respiratory sensitizers.</p> <table border="0"> <thead> <tr> <th style="text-align: left;">Common name</th> <th style="text-align: left;">IARC</th> <th style="text-align: left;">NTP</th> </tr> </thead> <tbody> <tr> <td>Potassium carbamoylcarbamate</td> <td>-</td> <td>-</td> </tr> <tr> <td>Amorphous silica</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.</p> <p>Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</p> <p>Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect.</p> <p>Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause effects on reproduction.</p> <p>No target organ is listed.</p> <p>No target organ is listed.</p>	Common name	IARC	NTP	Potassium carbamoylcarbamate	-	-	Amorphous silica	-	-
Common name	IARC	NTP									
Potassium carbamoylcarbamate	-	-									
Amorphous silica	-	-									
<b>Interactive effects</b>	<p>No information available for this product.</p>										
<b>Other information</b>	<p>The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimate (ATE) by inhalation of the dust mixture was calculated to be greater than 5 mg/L/4h. This value is not classified according to GHS. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.</p>										

## 12. Ecological information

<b>Ecological toxicity</b>	Fish - Pimephales promelas [semi-static]	LC50 >93.5 mg/L; 96h (potassium carbamoylcarbamate) OECD 203
	Aquatic Invertebrate - Daphnia Magna (semi-static)	EC50 >88.4 mg/L; 48h (potassium carbamoylcarbamate) OECD 202
	Algae, Pseudokirchneriella subcapitata	EC50 >27.4 mg/L; 72h (potassium carbamoylcarbamate) OECD 201
	Fish - Danio rerio (static)	LC50 >10000 mg/L; 96h (triiron tetraoxide) OECD 203
	Aquatic Invertebrate - Daphnia Magna, Water flea (static)	EC50 >100 mg/L; 48h (iron oxide) OECD 202
<b>Persistence</b>	Contains an or many ingredients that may be persistent in aquatic environment. Potassium carbamoylcarbamate is not persistent in the environment.	
<b>Degradability</b>	Potassium carbamoylcarbamate is chemically unstable at acidic pH. It is also readily biodegradable at 78.8% on day 7, and 84.2% on day 14 (OECD Guideline 301D). The term biodegradability, as such, is not applicable to inorganic compounds.	
<b>Bioaccumulative potential</b>	No information available for this product. Potassium carbamoylcarbamate has a partition factors Log Kow of -1.08 and a low potential for bioconcentration (BCF) estimated at 3, indicating that it should not accumulate in the food chain. Bioaccumulation of iron oxide salts may occur in aquatic and terrestrial animals and plants, but very little bioaccumulation occurs in the food chain.	
<b>Mobility in soil</b>	No information available for this product. The estimated Koc value of 0.35 suggests that Potassium carbamoylcarbamate is expected to have very high mobility in soil and a low potential for adsorption to organic carbon. Iron oxide compounds are poorly soluble in water; their distribution in the environment is primarily with the soil and sediment. There is little partition in water and in air.	
<b>Other adverse effects</b>	This chemical does not deplete the ozone layer.	

## 13. Disposal considerations

<b>Container</b> 	Important! Prevent waste generation. Use in full. Waste product may be send to landfill. Rinse and recycle empty container, if possible. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.
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## 14. Transport information

<b>UN Number</b>	UN
<b>UN Proper Shipping Name</b>	Not regulated by TDG (Canada) and 49 CFR DOT (USA).
<b>Environmental hazards</b>	This material is not listed as a marine pollutant.
<b>Special precautions for user</b>	No information available for this product.
<b>TDG - Transportation of Dangerous Goods (Canada)</b>	
<b>Transport hazard class(es)</b>	Not regulated
<b>Packing group</b>	Not regulated
<b>Emergency response guidebook 2012</b>	
<b>IMO/IMDG - International Maritime Transport</b>	

<b>Classification</b>	Not regulated
<b>IATA - International Air Transport Association</b>	
<b>Classification</b>	Not regulated
These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.	

## 15. Regulatory information

### CANADA

Common name	CAS	CEPA	DSL	NDSL	NPRI
Potassium carbamoylcarbamate	26479-35-6				
Triiron tetraoxide	1317-61-9		X		
Iron (III) Oxide	1309-37-1		X		
Amorphous silica	7631-86-9		X		
Mica	12001-26-2		X		
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6		X		

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act

- DSL: Domestic Substances List Inventory

- NDSL: Non-Domestic Substances List Inventory

- NPRI: National Pollutant Release Inventory Substances

### UNITED STATE OF AMERICA

Common name	CAS	TSCA	CERCLA	EPCRA 313	EPCRA 302/304	CAA 112(b) HON	CAA 112(b) HAP	CAA 112(r)	CWA 311	CWA Priority
Potassium carbamoylcarbamate	26479-35-6	X								
Triiron tetraoxide	1317-61-9	X								
Iron (III) Oxide	1309-37-1	X								
Amorphous silica	7631-86-9	X								
Mica	12001-26-2	X								
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	X								

#### Other regulations

- California Proposition 65:  
No ingredients are listed.

#### WHMIS 1988



Non-WHMIS controlled

#### HMIS

1	Health
0	Flamability
0	Reactivity
X	Protective Equipment

#### NFPA



## 16. Other information

<b>Date (YYYY-MM-DD)</b>	Firetrace Aerospace, LLC 2016-02-01
<b>Version</b>	01
<b>Other information</b>	<p>REFERENCES:</p> <ul style="list-style-type: none"><li>- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <a href="http://hazmap.nlm.nih.gov/index.php">http://hazmap.nlm.nih.gov/index.php</a></li><li>- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a></li><li>- NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, <a href="http://www.cdc.gov/niosh/npg/npg.html">http://www.cdc.gov/niosh/npg/npg.html</a></li><li>- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <a href="http://www.reptox.csst.qc.ca">http://www.reptox.csst.qc.ca</a></li></ul> <p>ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages WHMIS: Workplace Hazardous Materials Information System</p> <p>To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.</p>