Black Paste Flux

SAFETY DATA SHEET

Control # 1030 date 5/29/15

SECTION: 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product Name: Weldcote Black Paste Flux

Product Identification: Silver Brazing Paste Flux

AWS A5.31

Product Specification:

1.2 Relevant identified uses of the substance or mixture and uses advised against:

1.2.1 Relevant identified uses: For welding consumables and related products.

1.2.2 Uses advised: Reference the [7. Handling and storage]

1.3 Details of the supplier of the safety data sheet:

Supplier:

Weldcote Metals Inc.
842 Oak Grove Rd.
Kings Mountain, NC 28086

Emergency telephone number: (800) 424-9300 or (704) 739-4115

Email: info@weldcotemetals.com

SECTION: 2 HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

The product is placed on the market in solid form

2.1.1 Classification in accordance with GHS-US

Skin Sens. H315

Label elements:

2.2 GHS-US labeling

Hazard Pictograms (GHS-US):

Signal word (GHS-US): Danger

Hazard statements (GH5-US):

H360 May damage fertility or the unborn child

H301 Toxic if swallowed

H319 Causes serious eye irritation

Precautionary statements:

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P273 Avoid release into the environment

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 If exposed or concerned: Get medical advice/attention.

P391 Collect spillage

P405 Store locked up

P501 Dispose of contents and container in accordance with local regional/national international regulations.

2.3 Other hazards: No additional information available

2.4 Unknown acute toxicity (GHS-US): No data available.

SECTION: 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: No data available

Full Text of H-phrases: see section 16

3.2 Mixtures: The mixture contains dangerous substances:

Substance name		Product Identifier (CAS No)	% Percent	GHS-US classification
Potassium Fluorohydroborate	$B_3F_4HO_4$	12228-71-6	30-45	Acute Tox. 1 (Oral) H301
Potassium Tetraborate	$B_4K_2O_7$	1332-77-0	15-25	Not classified
Boric acid	H_3BO_3	10043-35-3	15-30	Repr. 1B, H360
Potassium Fluoborate	BF4K	14075-53-7	7-15	Acute Tox. 4 (Oral) H302

SECTION: 4 FIRST AID MEASURES

4.1 Description of first aid measures:

First-aid measures after inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get medical attention.

First-aid measures after skin contact: Flush with water for at least 15 minutes. Seek medical attention if irritation develops or persists.

First-aid measures after eye contact: Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if discomfort persists.

First-aid measures after ingestion: Do NOT induce vomiting. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

Symptoms/injuries after inhalation: Short-term (acute) overexposure to the gases, fumes, and dusts may include irritation of the eyes, lungs, nose, and throat. Some toxic gases associated with welding may cause pulmonary edema, asphyxiation, and death.
Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty in breathing, frequent coughing, or chest pain. The presence of chromium/chromate in fume can cause irritation of nasal membranes and skin. The presence of nickel compounds in fume can cause metallic taste, nausea, tightness of chest, fever, and allergic reaction. Excessive inhalation or ingestion of manganese can produce manganese poisoning. Overexposure to manganese compounds may affect the central nervous system, symptoms of which are languor, sleepiness, muscular weakness, emotional disturbances, and spastic gait resembling Parkinsonism. These symptoms can become progressive and permanent if not treated. Excessive inhalation of fumes may cause "Metal Fume Fever" with Flu-like symptoms such as chills, fever, body aches, vomiting, sweating, etc.

Symptoms/injuries after skin contact: Dusts may cause irritation.

Symptoms/injuries after eye contact: Causes eye irritation.

Symptoms/injuries after ingestion: Not an anticipated route of exposure during normal product handling. May be harmful if ingested.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

SECTION: 5 FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture: Fire may produce irritating or poisonous gases.

Fire hazard: Not flammable

Explosion hazard: None known

5.3 Advice for firefighters: In the event of fire, wear self-contained breathing apparatus and full protective gear.

SECTION: 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment as specified in Section 8. Ensure adequate ventilation.

For emergency responders: No data available.

6.2 Environmental precautions: Avoid release into the environment. Avoid dispersal of spilled material and contact with soil, ground and surface water drains and sewers.

6.3 Methods and material for containment and cleaning up: Take up mechanically. Collect the material in labeled containers and dispose of according to local and regional authority requirements.

6.4 Reference to other sections: See Section 7 for information of safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION: 7 HANDLING AND STORAGE

7.1 Precautions and safe handling: Welding may produce dust, fumes and gases hazardous to health. Avoid breathing dust, fumes and gases. Use adequate ventilation. Keep away from sources of ignition. Avoid contact with skin, eyes and clothing. Do not eat, drink and smoke in work areas.

7.2 Conditions for safe storage, including and incompatibilities: Store in cool, dry and well-ventilated place. Keep away from incompatible materials. Keep away from heat and open flame.

7.3 Specific end use(s): For welding consumables and related products.

SECTION: 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters: Exposure limits were not established for this product

Potassium Fluorohydroborate	(CAS No) 12228-71-6	
USA ACGIH	ACGIH (TWA) (mg/m^3)	2.5 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m^3)	2.5 mg/m^3
Potassium Tetraborate	(CAS No) 1332-77-0	
USA ACGIH	ACGIH (TWA) (mg/m^3)	5 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m^3)	5 mg/m^3
Boric acid	(CAS No) 10043-35-3	
USA ACGIH	ACGIH (TWA) (mg/m^3)	15 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m^3)	10 mg/m^3
Potassium Fluoborate	(CAS No) 14075-53-7	
USA ACGIH	ACGIH (TWA) (mg/m^3)	2 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m^3)	2.5 mg/m^3

8.2 Exposure controls:

Appropriate engineering controls: local exhaust and general ventilation must be adequate to meet exposure standards.

Hand protection: Wear welding gloves.

Eye protection: Wear helmet or face shield with filter lens of appropriate shade number. See ANSI/ASC Z49.1 Section 4.2. Provide protective screens and flash goggles, if necessary, to shield others.

Skin and body protection: Wear head and body protection, which help to prevent injury from radiation, sparks, flame and electrical shock. See ANSI Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the employee not to touch live electrical parts and to insulate him/herself from work and ground. Welders should not wear short sleeve shirts or short pants.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

SECTION: 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical state:	- Paste
Appearances:	- Black paste
Color:	- Black
Odor:	- Odorless
Odor threshold:	- No data available
pH:	- No data available
Relative evaporation rate (butyl acetate = l):	- No data available
Melting point:	- 500 C
Freezing point:	- No data available
Initial boiling point and boiling range:	- No data available
Flash point:	- No data available
Self ignition temperature:	- No data available
Decomposition temperature:	- No data available
Flammability (solid, gas):	- No data available
Vapour pressure:	" No data available
Relative vapour density at 20· C:	- No data available
Relative density:	- No data available
Solubility(ies)	- No data available
Log Pow:	- No data available
Log Kow:	- No data available
Viscosity, kinematic:	- No data available
Viscosity, dynamic:	- No data available
Explosive properties:	- No data available
Oxidizing properties:	- No data available
Explosive limits:	- No data available

9.2 Other information: No additional information available.

SECTION: 10 STABILITY AND REACTIVITY

10.1 Reactivity: No additional information available.

10.2 Chemical stability: The product is stable under normal conditions. When using it may produce dangerous fumes and gases.

10.3 Possibility of hazardous reactions: Will not occur.

10.4 Conditions to avoid: None

10.5 Incompatible materials: None

10.6 Hazardous decomposition products: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and welding consumables used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coating on the metal being welded (i.e. paint, painting, galvanizing), the number of welders, the volume of the work area, the quality and the amount of ventilation, the position of the welders head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from the cleaning and degreasing activities).

When an electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Fume and gas decomposition, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration. Also, new compounds not in the electrodes may form. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the materials shown in Section 3, plus those from the base metal coating, etc., as noted above. Reasonable expected fume constituents of this product would include: Complex oxides of iron, manganese, silicon, chromium, nickel, columbium, molybdenum, copper, carbon dioxide, carbon monoxide, ozone and nitrogen Oxides. Some products will also contain antimony, barium, molybdenum, aluminum, columbium, magnesium, strontium, tungsten, and or zirconium. Fume limit for chromium, nickel and or manganese may be reached before limit of 5 mg/m3 of general welding fumes is reached.

Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. See ANSI/AWS Fl.!, Fl.3 and Fl.5, available from the American Welding Society, 550 N.W. Lejeune Road, Miami, FL 33126.

SECTION: 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity: Harmful if swallowed

Substance name	CAS number	LD5O oral rat (mg/kg)	ATE (oral) (mg/kg)	Comments
Potassium Fluorohydroborate	12228-71-6	5854 mg/kg		
Potassium Tetraborate	1332-77-0	>2500 mg/kg	>2000 mg/kg	
Boric acid	10043-35-3	>2660 mg/kg	>53 mg/kg	
Potassium Fluoborate	14075-53-7			

Skin corrosion/irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	May cause an allergic skin reaction.
Germ cell mutagenicity:	Not classified
Carcinogenicity:	May cause cancer.
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure):	Not classified
Specific target organ toxicity (repeated exposure):	Causes damage to organs through prolonged or repeated exposure
Aspiration hazard:	Not classified

SECTION: 12 ECOLOGICAL INFORMATION

12.1 Toxicity:

Ecology - general: No data available.

Potassium Fluorohydroborate	(CAS No) 12228-71-6
LC50 fishes 1	(no bioaccumulation expected)
Potassium Tetraborate	**(CAS No) 1332-77-0**
LC50 fishes 1	280 mg/l (Exposure time: 96 h - species: Oncorhynchus mykiss [semi-static])
EC50 other aquatic organisms 1	133 mg/l (Exposure time: 96 h - species: Ctenopharynhodon idella[static])
Boric acid	**(CAS No) 10043-35-3**
LC50 fishes 1	279 mg/l - (Exposure time: 96 h - species: Ptychocheilus lucius)
EC50 Daphnia 1	133 mg/l (Exposure time: 48 h - species: Daphnia magna [static])
Potassium Fluoborate	**(CAS No) 14075-53-7**
LC50 fishes 1	(no bioaccumulation expected)

12.2 Persistence and degradability: No additional information available.

12.3 Bioaccumulative potential: No additional information available.

12.4 Mobility in soil: No additional information available.

12.5 Other adverse effects: No additional information available.

SECTION: 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: Dispose of in accordance with local and national regulations.

Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION: 14 TRANSPORT INFORMATION

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1 UN Number: Not a dangerous good in sense of transport regulations

14.2 UN proper shipping name: Not applicable

SECTION: 15 REGULATORY INFORMATION

15.1 US Federal Regulations:

Potassium Fluorohydroborate (CAS No) 12228-71-6
Listed on the United States TSCA (Toxic Substances Control Act) Inventory
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting 1.0%
Potassium Tetraborate (CAS No) 1332-77-0
Listed on the United States TSCA (Toxic Substances Control Act) Inventory
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting 1.0% (dust or fume only)
Boric acid (CAS No) 10043-35-3
Listed on the United States TSCA (Toxic Substances Control Act) Inventory
Potassium Fluoborate (CAS No) 14075-53-7
Listed on the United States TSCA (Toxic Substances Control Act) Inventory
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting 1.0%

15.2 US State Regulations:

Potassium Fluorohydroborate (CAS No) 12228-71-6				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				
Potassium Tetraborate (CAS No) 1332-77-0				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				
Boric acid (CAS No) 10043-35-3				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				
Potassium Fluoborate (CAS No) 14075-53-78				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				

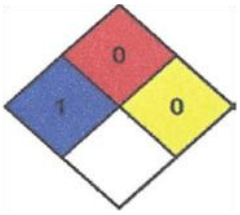
Potassium Fluorohydroborate	(CAS No)	12228-71-6
U.S. - Massachusetts - Right To Know List		
U.S. - Minnesota - Hazardous Substance List		
U.S. - New Jersey - Right to Know Hazardous Substance List		
U.S. - Pennsylvania - RTK (Right to Know) List		
Potassium Tetraborate	(CAS No)	1332-77-0
U.S. - Massachusetts - Right To Know List		
U.S. - Minnesota - Hazardous Substance List		
U.S. - New Jersey - Right to Know Hazardous Substance List		
U.S. - Pennsylvania - RTK (Right to Know) List		
Boric acid	(CAS No)	10043-35-3
U.S. - Massachusetts - Right To Know List		
U.S. - Minnesota - Hazardous Substance List		
U.S. - New Jersey - Right to Know Hazardous Substance List		
U.S. - Pennsylvania - RTK (Right to Know) List		
Potassium Fluoborate	(CAS No)	14075-53-7
U.S. - Massachusetts - Right To Know List		
U.S. - Minnesota - Hazardous Substance List		
U.S. - New Jersey - Right to Know Hazardous Substance List		
U.S. - Pennsylvania - RTK (Right to Know) List		

SECTION: 16 OTHER INFORMATION

Full text of H-phrases:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
H360	May damage fertility or the unborn child
H301	Toxic if swallowed
H302	Harmful if swallowed
H315	Causes skin irritation
H322	Harmful if inhaled
P280	Wear protective gloves/protection clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: call a POISON CENTER or doctor or physician if you feel unwell
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

NFPA health hazard: 1 – Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard: 0 – Materials that will not burn.
MFPA reactivity: 0 – Normally stable, even under fire exposure conditions, and are not reactive with water



HMIS III Rating
Health: 2 Moderate Hazard – Temporary or minor injury may occur
Flammability: 0 Minimal Hazard
Physical: 0 Minimal Hazard

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