Material Safety Data Sheet

WF303 All Purpose Brazing Flux Powder

Section 1: Product Information

Product Description & Use:

WF303 All Purpose Brazing Flux Powder general purpose brazing flux. Use with low fuming bronze and nickel silver brazing alloys steel, cast iron, copper-base alloys.

Chemical Formula: N/A

Product Use: Exclusively used in torch brazing

User Responsibility: The information in this Material Data Safety Sheet cannot be expected to cover all potential, individual workplace conditions. The user of the product has a responsibility to provide and maintain a safe workplace. All areas of operation should be examined to determine if, or where, safeguards- in addition to those described in this Material Data Safety Sheet-are required. Health hazards and safety information contained within this document should be passed on to your customers and/or employees as the case may be.

Section 2: Hazardous Ingredients

Mixture of: Borax, boric acid and potassium tetraborate.

Note: The individual chemical substances that are identified above are known to react with each other during manufacture of the individual flux products to form new more complex compounds, the nature of which have not been established. The Health and Safety information, EC Material Classification etc. for the products have been determined by means of physical testing, see Section 11 Toxicological Data.

CAS Numbers For Chemical Substances Identified above.

Substance	CAS Number.
Borax	1303-96-4
Boric acid	10043-35-3
Potassium tetraborate	1332-77-0

Section 3: Hazard Identification

The products identified above are classified as harmful as supplied. The main hazards with these products occur when used as brazing fluxes. On heating the flux will fume slightly, and

with overheating the fumes will increase. The fumes produced may include hydrogen fluoride and boron trifluoride, which can cause irritation of the nasal passages, eyes and hroat. To minimise evolution of flux fume always use the products with brazing filler metals that have liquidus temperatures 50°C less than the maximum working temperature shown within the table in Section 1. Severe long term exposure to flux fume may result in fluorosis. In acute cases there is a danger of ulmonary oedema although his occurrence could also result from inhalation of razing filler metal fume or torch gases. Inhalation of flux fume will be irritating to the nose and throat and will cause smarting of the eyes. Fluxes are harmful by ingestion, and will be irritating to the eyes. Skin contact may cause moderate irritation. Tests carried out on fluxes indicate that they are moderately irritating to the skin and if the skin is broken immediate irritation will occur on contact.

Section 4: First Aid Treatment

Inhalation	Remove from source of exposure and allow to rest in fresh air. In acute cases apply artificial respiration and if necessary summon medical aid.
Ingestion	Rinse mouth with water & give patient water or milk mixed with calcium carbonate (chalk) to drink. Do not induce vomiting. Summon medical aid.
Eyes	Irrigate with water or isotonic saline for up to 20 minutes. Seek medical attention if there is any hint of eye damage.
Skin	Remove any contaminated clothing and wash skin with soap and water. Seek medical attention if sores develop. Launder clothing before re-use.

Section 5: Fire Fighting Measures

Non flammable. Use full protection with breathing apparatus if involved in a fire as harmful fumes may be evolved. Use any extinguishing medium appropriate for surrounding fire.

Section 6: Accidental Release Measures

Powder	Carefully sweep up and collect in a suitable container for re-use or disposal.

Section 7: Handling & Storage

Handling	Use only under conditions of good local ventilation or efficient extraction systems and do not inhale fumes or dust evolved during use. Avoid contact with skin and eyes. Do not eat, drink, smoke or apply cosmetics whilst using these materials. Keep away from food, drink and animal feed stuffs and out of reach of children. Observe good industrial hygiene practices.
Storage	Store in a cool, dry place. Keep container closed when not in use. Do not freeze paste.

Section 8: Exposure Controls

United Kingdom Workplace Exposure limits (EH40/2005) For The Fumes Evolved During Brazing.

Element	Long Term (8 hour)	Short Term (15 minutes)
Fluoride (inorganic as F)	2.5 mg / m3	
Hydrogen fluoride (as F)	1.5 mg / m3	2.5 mg / m3

* Time Weighted Average

PERSONAL PROTECTION

Avoid exposure to fume with good ventilation or local extraction. If risk of inhalation exists, personal respiratory protection should be worn. Safety glasses should be worn as well as gloves if required. Wash hands after using these products. The use of protective clothing is recommended. The use of barrier creams may help prevent skin irritation.

Section 9: Physical & Chemical Properties

Appearance	White or brown powder or paste
Odour	No detectable odour
pH	8
Boiling/Melting Point	750-950° C
Flash Point	Not applicable
Flammability	Not flammable
Oxidising properties	Not oxidising
Solubility	Water-low solubility, no specific data.

Section 10: Stability & Reactivity

Containers of powder left open may absorb moisture and become lumpy. Pastes are water based and, whilst stable, will lose water via evaporation if left open. Avoid contact with acids.

Section 11: Toxicological Information

Toxicological data for these preparations: LD50 (oral-rat) >200mg/Kg
Classified as moderately irritating, according to Draize skin test.

Section 12: Ecological Information

Likely to be harmful to all species of animal life. As far as is known no other threat is posed

to the environment.

Section 13: Disposal Considerations

Disposal according to local and national regulations. Registered waste contractors should be aware of the composition and data given in Section 2. of this document.

Section 14: Transport Information

Not classified as hazardous for land, sea or air transport. No UN No's have been issued for fluxes.

Section 15: Regulatory Information

EC Supply	Harmful	
Risk Phrases	R20/22	Harmful by inhalation and if swallowed
	R36/38	Irritating to eyes and skin
Safety Phrases	S20/21	When using do not eat, drink or smoke
	S22	Do not breath dust
	S23	Do not breath fumes
		In case of eye contact, rinse immediately with water and seek medical advice
	S26	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
	S51	Use only in well ventilated areas

Section 16: Other Information

and strong oxidising agents. No other adverse reactions are known.