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SAFETY DATA SHEET
BRAZING FLUXES

1. Identification of Substance

This Product Data Sheet gives specific information on brazing fluxes.

| Product Name | Form | Working Range | pH* | Composition Group |
|------------------------|--------------|---------------|-----|-------------------|
| Easy-Flo Flux Powder | White Powder | 550-800°C | 8 | 1 |
| Tenacity No 4A | White Powder | 600-850°C | 8 | 2 |
| Tenacity No 5 | White Powder | 600-900°C | 9 | 2 |
| Tenacity No 125 Powder | White Powder | 750-1200°C | 7 | 3 |

**pH opaqueous suspension*

2. Composition

Group 1 – Mixture of potassium bifluoride [CAS No 789-29-9], potassium tetraborate [CAS No. 1332.77.0] potassium fluoroborate [CAS No. 14075-53-7] with boric acid [CAS No. 10043-35-3] and boric anhydride [CAS No. 1303-86-2].

Group 2– Mixture of potassium bifluoride [CAS No. 7789-29-9], potassium tetraborate [CAS No. 1332-77-0] and potassium fluorosilicate [CAS No. 1687-90-2] with boric acid [CAS No. 10043-35-3] and boric anhydride [CAS No. 1303-86-2].

Group 3– Mixture of potassium tetraborate [CAS No. 1332-77-0] and potassium fluorosilicate [CAS No. 16871-90-2] with borax [CAS No. 1303-96-4] and boric acid [CAS No. 10043-35-3].

3. Hazard Identification

The main hazard with this product occurs in its use. On heating the flux will fume slightly and with overheating the fume will increase. The fumes produced include hydrogen fluoride and boron trifluoride, which can cause irritation of the nasal passages, eyes and throat.

The flux is harmful by ingestion and is irritating to the eyes. Contact with skin may cause moderate irritation.

4. First Aid Measures

Severe long-term exposure to fume may result in fluorosis. In acute cases there is a danger of pulmonary oedema although this occurrence could also result from inhalation of brazing metal fume or torch gases. Inhalation of fumes will be irritating to the nose and throat and will cause smarting of the eyes.

Tests carried out on fluxes indicate they are moderately irritating to the skin and if the skin is broken immediate irritation will occur on contact. The use of barrier creams may prevent skin irritation.

- Inhalation: Remove from 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 and 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.

5. Fire Fighting Measure

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

6. Accidental Release Measures

- Powder: Carefully sweep up and collect in suitable container for re-use or disposal.
- Paste: Either collect in suitable container for re-use or disposal. For large spills, cover with sand or other inert absorbent and collect in suitable container for disposal. Wash area with water.
- Avoid contact with skin or eyes and do not inhale dust.
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7. Handling and Storage

- Handling: Use only under conditions of good local ventilation or efficient extraction systems and do not inhale fumes evolved during use. Avoid contact with skin and eyes. Do not eat, drink, smoke or apply cosmetics whilst using this material. Keep away from food, drink and animal feeding 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.
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8. Exposure Controls and Personal Protection

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

| Element | Long Term (8 hour) TWA* Value | Short Term (15 minutes) TWA* Value |
|--|-----------------------------------|---------------------------------------|
| Fluoride (inorganic as F) (CAS No. 16984-48-8) | 2.5 mg / m ³ | |
| Hydrogen fluoride (as F) (CAS No. 7664-39-3) | 1.5 mg / m ³ | 2.5 mg / m ³ |

*Time Weighted Average

Avoid exposure to fume with good ventilation or local extraction. If a risk of inhalation exists, personal respiratory protection should be worn. Safety glasses should be worn as well as impervious gloves to prevent skin contact. Wash hands after using this material. The use of protective clothing is recommended.

9. Physical and Chemical Properties

| | |
|------------------------|--|
| Appearance: | White or brown powder or paste See page 1 |
| Odour: | No detectable odour |
| pH: | See page 1 |
| Boiling/melting point: | Becomes fluid on heating; working range – see page 1 |
| Flash point: | Not applicable |
| Flammability: | Not flammable |
| Oxidising properties: | Not oxidising |
| Solubility: | Water-low solubility, no specific data |

10. Stability and Reactivity

Containers of powder left open once the seals are broken may absorb moisture and become lumpy. Pastes are water based and whilst stable will lose water by evaporation if left open. Avoid contact with acids and strong oxidising agents.

No other adverse reactions are known.

11. Toxicological Information

Toxicological data for these preparations: LD50 {oral – rat} > 300 mg/kg

Classified as moderately irritating according to Draize skin test.

12. Ecological Information

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

13. Disposal Consideration

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

14. Transport Information

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

15. Regulatory Information

EC Supply



Material Classification

Harmful

Risk Phrases

R20/22
R36/38

Harmful by inhalation and if swallowed
Irritating to eyes and skin

Safety Phrases

S20/21
S22
S23
S26
S45
S51

When using do not eat, drink or smoke
Do not breath dust
Do not breath fumes
In case of eye contact, rinse immediately with water and
seek medical advice
In case of accident or if you feel unwell seek medical
advice immediately(show the label where possible)
Use only in well ventilated areas
