

SAFETY DATA SHEET (SDS)

Aluminum Brazing Flux

Please ensure that this SDS is received by the appropriate persons

Review Date: 03/07/2023 v01

Emergency: 0860 02 02 02

Document Number: AFX-SDS-0116

1. PRODUCT AND COMPANY IDENTIFICATION

Product Synonym	Aluminium Brazing Flux MS105
Chemical Formula	Na B F ₄ Formula blend of , Fluoroborate of Potassium, Boric Acid, Boric Anhydride Fluorosilicate of Potassium
Trade Name	Aluminium Flux White Powder 570 °C Melting Point
Colour Coding	Not coded
Product Code	W001753
Company Identification	African Oxygen Limited Grayston Office Park Building 7 128 Peter Road Sandown, Sandton, 2196 Tel. No: (011) 490-0400 Fax No: (011) 490-0530 Email: customer.service@afrox.linde.com www.afrox.com
Emergency Numbers	0860 02 02 02 (Afrox)

2. HAZARD IDENTIFICATION

Classification	- Classification under South African Hazardous Chemical Substances Regulations subsequently amended. (HCS) - Classification under the Globally Harmonized System of classification and labelling of chemicals (GHS)
Emergency Overview	Colour: Light grey Odour: None Taste: None Physical State: solid
Main Hazards	Causes severe skin burns
Adverse Health Effects	Irritant
Chemical Hazards	Corrosive solid-Skin Corrosive Harmful if swallowed Serious eye damage
Biological Hazards	None
Vapour Inhalation	Airway irritant
GHS Classification	- Serious eye damage – Category 1 - Causes skin irritation – Category 2 - Danger harmful if swallowed & Inhaled - Category 4

GHS Pictogram



GHS Signal Words

Danger

GHS Hazard Statements

- H318 - Causes serious eye damage
- H315 - Causes skin irritation
- H302 + H332 - Danger harmful if swallowed & inhaled

GHS Precautionary Statements

- Prevention:**
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
 - P264 - Wash face, hands and any exposed skin thoroughly after handling
 - P270 - Do not eat, drink or smoke when using this product
 - P261: Avoid breathing dust/fume/gas/vapours
 - P271: Use only outdoors or in a well-ventilated area

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
- P310 : Immediately call a POISON CENTER or doctor/physician
- P302+352: If on skin -wash with plenty water
- P321 Specific treatment (see section 4 First Aid measures)
- P332 + P313 If skin irritation occurs: Get medical advice/attention
- P362 + P364 Take off contaminated clothing and wash it before reuse
- P301 + P312: IF SWALLOWED: Call a POISON CENTRE/ doctor
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

Storage:

- P405: Store locked up

Disposal:

- P501: Dispose of contents/container in accordance with local / regional / national / international regulations

Other Hazards that do not result in classification

- None

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3. COMPOSITION OF INGREDIENTS

Chemical name	Bifluoride, Tetraborate, Fluoroborate of Potassium, Boric Acid, Boric Anhydride
Chemical family	Fluorosilicate of Potassium, Elemental Boron, Potassium Tetraborate, Borax And Boric Acid, Boric Oxide, Silicofluoride of Potassium, Potassium Bifluoride, Bifluoride And Organic Polymers
CAS No	13755-29-8
UN No	1759
ERG No	154
Hazard class	8
Hazchem Warning	Corrosive

4. FIRST AID MEASURES

Eye contact	- Irrigate with water or isotonic saline for up to 20 minutes. Seek medical attention if there is any hint of eye damage
Skin Contact	- Remove any contaminated clothing and wash skin with soap and water. Seek medical attention if sores develop
Ingestion	- Rinse mouth with water and give patient water or milk to drink. Do not induce vomiting. Seek medical advice
Inhalation	Remove from exposure and allow to rest in fresh air. In acute cases apply artificial respiration and, if necessary, summon medical aid. Seek medical advice

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	- All medias suitable
Unsuitable extinguishing media	- None
Specific Hazards	- This brazing flux has no particularly hazardous properties. When handling the concentrate, rubber gloves, an apron and eye protection should be worn
Special fire fighting procedures:	None required. This product is non-flammable. Remove containers from the vicinity of the fire. Keep containers cool that cannot be removed.
Special protective equipment for firefighters	Use full protection with breathing apparatus Eye protection and protective gloves should be worn when handling the product for lengthy periods of time.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and	Eye protection and protective gloves should be worn when handling the product for lengthy periods of time.
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emergency procedures:	
Environmental Precautions	No available data
Methods and material for containment and cleaning up:	Powder: Carefully sweep up and collect in suitable container for re-use or disposal. Paste: Either collects 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. Avoid contact with skin or eyes and do not inhale dust.

7. HANDLING AND STORAGE

Safe 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: Under exclusion of moisture and chemicals in tightly closed containers at ambient temperature. Shelf life of the material is 6 months
Conditions for safe storage, including any incompatibilities	Ensure good stock rotation practices.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Hazards (HCS)	Fluoride (as Fluorine) TWA: 2.5 mg/m3 TWA 8 Hours
Engineering Control Measures	Ensure that eyewash stations and safety showers are close to the workstation location
Personal Protection	Eye protection and protective gloves should be worn when handling the product for lengthy periods of time
Eyes	Wear appropriate protective eyeglasses or chemical safety goggles
Hands	Protective gloves
Body protection	Wear appropriate protective gloves and clothing to prevent skin exposure
Feet	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Brazing fluxes
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Chemical Symbol	Na B F4
Physical state	Solid powder
Form:	Solid
Colour:	White powder
Odour:	None
Odour Threshold:	None
pH:1% soln in water at 20°C	Not Data
Melting Point:	384 °C
Boiling Point:	No data
Sublimation Point:	No data
Critical Temp. (°C):	No data
Flash Point:	No data
Evaporation Rate:	No data
Flammability (solid):	Not flammable
Flammability limit - upper (%):	Not flammable
Flammability limit - lower(%):	Not flammable
Vapour pressure:	No data
Vapour density (air=1)	No data
Relative density:	No data
Solubility in Water:	Soluble in water 1080g/l
Partition coefficient (n-octanol/water):	No data
Autoignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity	
Kinematic viscosity:	No data
Dynamic viscosity:	No data
Explosive properties:	Not applicable
Oxidising Properties:	Not applicable
Molecular weight	109.79

Carcinogenicity	No data
Mutagenicity	No data
Reproductive Hazards	No data

12. ECOLOGICAL INFORMATION

Toxicity	Toxicological data for these preparations: LD50 (oral) > 200mg/kg.
Persistence and degradability	Soluble in water Persistence is unlikely based on information available
Bio-accumulative Potential Product	No data
Mobility in soil	Will likely be mobile in the environment due to its water solubility
Results of PBT and vPvB assessment	No data
Other adverse effects	No data
Effect on ozone layer	No data
Effect on the global warming (CO2=1)	No data

13. DISPOSAL CONSIDERATIONS

Disposal Methods	Disposal according to local and national regulations
Disposal of Packaging	Disposal according to local and national regulations.

10. STABILITY AND REACTIVITY

Reactivity	Containers of powder left open once the seals are broken may absorb moisture and become lumpy. Do not freeze. No other adverse reactions are known
Chemical stability	Moisture sensitive
Possibility of hazardous reactions	No data
Conditions to avoid	Incompatible products. Exposure
Incompatible Materials	Water, Strong oxidizing agents, Strong bases
Hazardous Decomposition of Products	No data

11. TOXOLOGICAL INFORMATION

Acute Toxicity	Toxicological data for these preparations: LD50 (oral) > 200mg/kg.
Skin & eye contact	Classified as moderately irritating, according to Draize skin test.
Chronic Toxicity	No data

14. TRANSPORT INFORMATION

Road Transportation

UN No.	1759
Shipping Name	Alluminium Brazing Flux MS105
ERG No.	154
Class	8
Subsidiary Risk	Non-Flammable
Hazchem Warning	Corrosive Solid N.O.S 2X
IMDG	1759
Shipping Name	Alluminium Brazing Flux MS105
ERG No.	154
Class	8
Subsidiary Risk	Non-Flammable
Label	Corrosive
ICAO/IATA Code	None
Class	8
Packing Group:	200
Packaging instructions	- Passenger 75 kg - Cargo 150 kg

15. REGULATORY INFORMATION

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National legislation OHSact and Regulations 85 of 1993	
SANS 11014:2010 Edition 1	Safety data sheet for chemical products - Content and order of sections
SANS 10228:2012 Edition 6	The identification and classification of dangerous goods for transport by road and rail modes
SANS 10234:2019 Edition 2	Globally Harmonized System of classification and labelling of chemicals (GHS)
SUPPLEMENT TO SANS 10234	List of classification and labelling of chemicals in accordance with the Globally Harmonized System (GHS)
SABS 0238 (SANS 1238)	Welding and Thermal Cutting Process

16. OTHER INFORMATION

- Ensure all national/local regulations are observed.
- Ensure users and relevant persons understand the asphyxiation hazard
- Regularly check supplier's information sources for updated versions of SDS's

Revision Date	03/07/2023 v01
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Bibliography

Compressed Gas Association, Arlington, Virginia
 Handbook of Compressed Gases - 3rd Edition
 Matheson Gas Data Book - 6th Edition
 SANS 11014 - Safety data sheet for chemical products:
 Content and order of sections
 SANS 10234 - List of classification and labelling of
 chemicals in accordance with the Globally Harmonized
 System (GHS)
 SANS 10265 – Classification and Labelling of Dangerous
 Substances

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