

HANDY AND HARTMAN -- FLUX,AMS 3410 G,0-F-499 D,TYPE B,AWS CLASS -- 3439-00-582-1110  
===== Product Identification =====

Product ID:FLUX,AMS 3410 G,0-F-499 D,TYPE B,AWS CLASS

MSDS Date:01/16/1989

FSC:3439

NIIN:00-582-1110

MSDS Number: BLPFQ

=== Responsible Party ===

Company Name:HANDY AND HARTMAN

Address:850 THIRD AVE

City:NEW YORK

State:NY

ZIP:10022-6222

Country:US

Info Phone Num:212-752-3400/203-

259-8321

Emergency Phone Num:212-207-2632/203-259-8321

CAGE:JO825

=== Contractor Identification ===

Company Name:HANDY & HARMAN

Address:850 THIRD AVENUE

Box:City:NEW YORK

State:NY

ZIP:10022

Country:US

Phone:212-752-3400

CAGE:73977

Company Name:HANDY AND HARTMAN

Address:850 THIRD AVE

City:NEW YORK

State:NY

ZIP:10022-6222

Country:US

Phone:212-752-3400

CAGE:JO825

===== Composition/Information on Ingredients =====

Ingred Name:POTASSIUM FLUORIDE BORATE HYDROXIDE

CAS:12228-71-6

Fra

ction by Wt: 50 - 70%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:2.5 MG/M3 (MFR)  
ACGIH TLV:2.5 MG/M3 (MFR)

Ingred Name:POTASSIUM HYDROXIDE (SARA III)  
CAS:1310-58-3  
RTECS #:TT2100000  
Fraction by Wt: 0.05-.9%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:C, 2 MG/M3  
ACGIH TLV:C 2 MG/M3; 9192  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:POTASSIUM FLUORIDE SOLUTION  
CAS:7789-23-3  
RTECS #:TT0700000  
Fraction by Wt: 5 - 20%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:2.5 MG/M3 (MFR)  
ACGIH TLV:2.5 MG/M3  
(MFR)

Ingred Name:WATER  
CAS:7732-18-5  
RTECS #:ZC0110000  
Fraction by Wt: 20 - 35%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:NOT RELEVANT  
ACGIH TLV:NOT RELEVANT

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 245 MG/KG FLUORIDES  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:ACUTE-FLUORIDES ARE POISONOUS IF  
SWALLOWED.POTASSIUM HYDROXIDE IS  
BOTH TOXIC(LD50,RAT=365 MG/KG) &  
AN IRRITANT.PROLONGED SKIN CONTACT MAY CAUSE  
DERMATITIS.OVEREXPOSURE TO BF3 & HF GASES ON HEATING ARE  
TOXIC.B2O3 IS AN IRRITANT.CHRONIC-DERMATITIS.  
Effects of Overexposure:EYES, SKIN AND RESPIRATORY TRACT IRRITATION.  
TOXIC IF SWALLOWED OR INHALED.  
Medical Cond Aggravated by Exposure:PRE-EXISTING SKIN DISORDERS MAY BE  
AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

===== First Aid Measures =====

First Aid:CALL

A PHYSICIAN IN ALL CASES. INHALATION: REMOVE TO FRESH AIR. GIVE CPR/OXYGEN IF NEEDED. EYES: IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES HOLDING EYELIDS OPEN. SKIN: WASH WITH WATER. INGESTION: IF CONSCIOUS, INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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Fire Fighting Measures  
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Flash Point: NONE  
Extinguishing Media: WATER  
Fire Fighting Procedures: FIRE FIGHTERS SHOULD USE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS OPERATED IN POSITIVE PRESSURE MODE.  
USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

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Accidental Release Measures  
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Spill Release Procedures: AVOID CONTACT WITH EYES OR SKIN. AVOID HIGH TEMPERATURES. WEAR RUBBER GLOVES DURING SPILL CLEAN-UP. DILUTE AND WASH SPILLAGE WITH WATER.  
Neutralizing Agent: LIME THEN MAGNESIUM HYDROXIDE/ALUMINUM SULFATE

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Handling and Storage  
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Handling and Storage Precautions: STORAGE-STORE IN A DRY PLACE. AVOID HEATING ABOVE 1050F.  
Other Precautions: THIS FLUX IS OFTEN USED WITH BRAZING FILLER METALS CONTAINING CD. CD OXIDE FUMES IS A GREATER HAZARD THAN FLUORIDE FUME FROM FLUX. ZN OXIDE FUME MAY ALSO BE EMITTED. PRODUCTS OF COMBUSTION FROM TORCH/FURNACE MAY BE TOXIC NO<sub>2</sub>, O<sub>3</sub> & CO GASES.

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Exposure Controls/Personal Protection  
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Respiratory Protection: NONE FOR BRAZING IN PROPERLY VENTILATED AREA. IN CONFINED SPACE USE AN AIR LINE RESPIRATOR OR HOSE MASK, NIOSH/MSHA APPROVED HOSE TYPE C OR SELF-CONTAINED AIR RESPIRATOR.  
Ventilation: LOCAL EXHAUST/MECHANICAL  
Protective Gloves: LEATHER WELDING  
Eye Protection: SAFETY GOGGLES  
Other Protective Equipment: NON-FLAMMABLE PROTECTIVE CLOTHING, PLASTIC FRAME SAFETY SPECTACLES WITH SIDE SHIELDS-FILTER LENSES SHADE # 3 OR # 4  
Work Hygienic Practices: OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT WEAR CONTAMINATED CLOTHING OR FOOTWEAR.

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Supplemental Safety and Health

===== Physical/Chemical Properties =====

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:1050F,566C

Spec Gravity:1.67

pH:8.5

Solubility in Water:SOLUBLE

Appearance and Odor:WHITE PASTE - NO ODOR

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

NONE KNOWN

Stability Condition to Avoid:HIGH TEMPERATURES AND OPEN FLAMES

Hazardous Decomposition Products:EXCESSIVE FUMES (BF<sub>3</sub>)

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===== Disposal Considerations =====

Waste Disposal Methods:ALL EFFLUENT INGREDIENTS ARE INORGANIC. LOCAL REGULATIONS MAY REQUIRE THE REMOVAL OF FLUORIDES AND SUSPENDED TRACE METALS BEFORE DISCHARGE OF FINAL EFFLUENT. ADDITION OF LIME FOLLOWED BY  $Mg(OH)_2/Al_2(SO_4)_3$ , THEN FILTRATION IS A SIMPLE METHOD.

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