## ENGELHARD CORPORATION -- ULTRA FLUX-SILVER BRAZING FLUX -- 3439-00B050025

```
============ Product Identification ====================
Product ID: ULTRA FLUX-SILVER BRAZING FLUX
MSDS Date: 08/01/1988
FSC:3439
NIIN:00B050025
MSDS Number: BGSWT
=== Responsible Party ===
Company Name: ENGELHARD CORPORATION
Address: ROUTE 152
City:PLAINVILLE
State:MA
ZIP:02762
Country: US
Info Phone Num: 508-695-7811
Emergency Phone Num: 508-695-7811
CAGE:23036
=== Contractor Identification ===
Company Name: ENGELHARD CORP
Address:235 KILVERT ST
Box:City:WARWICK
State:RI
ZIP:02886
Country: US
Phone: 401-739-9550
CAGE: 86337
Company Name: ENGELHARD CORPORATION
Address:29001 SOLON ROAD
City: SOLON
State: OH
ZIP:44139
Country: US
Phone: 216-292-9200
CAGE:23036
====== Composition/Information on Ingredients ========
Ingred Name:POTASSIUM PENTABORATE
CAS:1229-13-9
Ingred Name: POTASSIUM BIFLUORIDE (POTASSIUM HYDROGEN FLUORIDE)
CAS: 7789-29-9
RTECS #:TS6650000
OSHA PEL: 2.5 MG/M3 (F)
ACGIH TLV: 2.5 MG/M3 (F); 8990
Ingred Name:SDS (SODIUM DODECYL SULFATE)
CAS:151-21-3
RTECS #:WT1050000
Ingred Name:WATER
CAS: 7732-18-5
RTECS #:ZC0110000
Ingred Name: BORIC ACID
CAS:10043-35-3
RTECS #:ED4550000
```

Ingred Name:POTASSIUM TETRABORATE CAS:1332-77-0 ========= Hazards Identification ============================ Routes of Entry: Inhalation: YES Skin: YES Ingestion: YES Health Hazards Acute and Chronic: AGGRAVATING TO ANY RESPIRATORY ILLNESS. Effects of Overexposure: FUMES CAN CAUSE IRRITATION TO EYES, NOSE AND Medical Cond Aggravated by Exposure: SEVERE IRRITANT TO OPEN SORES AND WOUNDS. First Aid: IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLE MOUTH TO MOUTH, IF BREATHING IS DIFFICULT. ========= Fire Fighting Measures ================ Extinguishing Media: THIS IS A NON-FLAMMABLE MATERIAL. Fire Fighting Procedures: NONE-USE FIRE EXTINGUISHERS APPRECIATE FOR SURROUNDING FIRE. Unusual Fire/Explosion Hazard: TOXIC FUMES CAN BE EMITTED IF HEATED TO MOLTEN CONDITIONS. ======= Accidental Release Measures ========= Spill Release Procedures: FLUSH WITH PLENTY OF WATER TO DILUTE THE FLUX. THE PRODUCT IS NONFLAMMABLE. ======== Handling and Storage =========== Other Precautions: MAINTAIN ADEQUATE AIRFLOW IF FUMES ARE PRESENT. ===== Exposure Controls/Personal Protection ======== Respiratory Protection: IN CONFINED SPACE USE OSHA APPROVED RESPIRATOR OR WHEN FLUORIDE FUMES EXCEED 2.5 MG PER CUBIC METER OF AIR WHILE BRAZING. Ventilation: LOCAL EXHAUST, MECHANICAL (GENERAL). Protective Gloves: NOT RECOMMENEDED-MAY ENTRAP FLUX. Eye Protection: RECOMMENDED. Other Protective Equipment: WEAR NON-FLAMMABLE PROTECTIVE CLOTHING. PROVIDE GOOD VENTILATION. Supplemental Safety and Health ON HEATING FLUORIDE FUMES ARE EVOLVED. INORGANIC FLUORIDE INHALATION LEADS TO IRRITATION OF THE EYES & NOSE, "CHRONIC FLUORINE POISONING" NAMELY, "FLUOROSIS" RESULTING IN SCLEROSIS OF BONES"-LOSS OF WEI GHT. DIRECT CONTACT OF FINGERS WITH FLUX CAN LEAD TO REACTION WITH SKIN (ITCHING). ======= Physical/Chemical Properties =========

Appearance and Odor: WHITE, ODORLESS PASTE.

Melt/Freeze Pt:M.P/F.P Text:800F

Solubility in Water: APPRECIABLE

Spec Gravity:1.12

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

Stability Indicator/Materials to Avoid:YES
Stability Condition to Avoid:NONE ACCORDING TO MFR.
Hazardous Decomposition Products:DECOMPOSES TO FLUORIDE WHEN HEATED TO
BRAZING TEMPERATURE.

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

Waste Disposal Methods: DILUTE WITH WATER.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.