MATERIAL SAFETY DATA SHEET

FORCE INDUSTRIES DIVISION
American Solder and Flux Co., Inc.
28 Industrial Boulevard
Paoli, PA 19301

191 A Fallon Road
Hollister, CA 95023

PHONE NUMBER: (800) 647-3575 - DAY
EMERGENCY: (800) 424-9300 - ALL HOURS

I. PRODUCT IDENTIFICATION

PRODUCT NAME: Aircosil #18

Appearance: Smooth white paste with no noticeable odor.
Use: General purpose "silver" solder/braze flux.

CAS number: N/A - mixture
Name: N/A - mixture

Chemical Name & Synonyms: N/A - mixture

II. CHEMICAL COMPOSITION

MATERIAL: CAS NAME	CAS #	PEL	HAZARD
Potassium bifluoride*	7789-29-9	2.5 mg/m^3	ACGIH
Potassium tetraborate**	1332-77-0	10.0 mg/m^3	OSHA
Potassium fluoborate	14075-53-7	2.5 mg/m^3	OSHA
Boric acid	10043-35-3	10.0 mg/m^3	OSHA

Remaning ingredients, if any, are non- hazardous and considered trade secret.

N/E = Not Established
N/A = Not Applicable

EMERGENCY PHONE NUMBER * CALL CHEMTREC (800) 424-9300 * AVAILABLE 24 HOURS

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: WARNING! Skin, nasal, and respiratory irritant; nausea. May be harmful if swallowed or if fumes are inhaled.

Effects of Chronic Exposure: Coughing, erythema, nausea. Osseous fluorosis due to fluoride.

Effects of Acute Overexposure

Swallowing: Can cause damage to digestive system. Corrosive to mucous membranes. May cause salivation, nausea, vomiting, diarrhea, and abdominal pain. Potassium ion may cause lower blood pressure, death. Fluoride ion can reduce serum calcium levels, possibly causing fatal hypocalcemia.

Skin Absorption: None currently known. Fumes may be penetrable.

Inhalation: Highly irritating to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated. Inhalation may yield: chills, labored breathing, fevers, and unproductive cough. The fluoride ion may cause hypo-calcemia - calcium deficiency in the blood. Inflammation and necrosis of mucous membranes.

Skin Contact: Severe dermatitis; possible burns and pustular dermatitis, corrosive to skin. Existing disorders will be aggravated. Hypocalcemia.

Eye Contact: Strong irritation to eyes, tearing, burn of eye surface, and corrosive to eyes. May cause blindness.

IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician at once or your Poison Control Center IMMEDIATELY - advise of Section II. Corrosive to mucous membranes. May contain corrosive hydrofluoric acid solution.

Skin: Promptly flush with water to remove all residue. If rash or burn develops, consulta physician. Severe irritant. Hydrofluoric acid possible.

Inhalation: Remove to fresh air. If fumes are inhaled, call a physician. Overinhalation may be fatal!

Eyes: Flush with water for at least 20 minutes to remove all residue. Get medical help NOW! Blindness can result! Hydrofluoric acid possible.

V. FIRE AND EXPLOSION DATA

Flashpoint (°F):	N/A
Flammable limits in air (% by volume)	
LOWER:	N/A
UPPER:	N/A
Extinguishing media:	Water, fog, or foam.
Special firefighting procedures:	Full protective equipment required. May release boron oxide and fluoride fumes.
Unusual fire and explosion hazards:	Avoid splashing this material and solutions of it onto personnel. Hydrofluoric acid solution may be formed within water runoff.

VI. REACTIVITY INFORMATION

Stability considerations:	Stable
Conditions to avoid:	Excessive heat: decomposes forming corrosive, skin penetrating, and toxic gases.
Hazardous polymerization:	Will not occur.
Conditions to avoid:	None
Incompatibility	
Materials to avoid:	Acids, alkalis
Hazardous combustion or Decomposition products:	Hydrogen fluoride and caustic potash are expected

VII. SPILL AND LEAK RESPONSE

Steps to be taken if material is released or spilled:	If molten allowed to solidify, contain, absorb, sweep-up and dispose. Flush area to chemical sewer. Prevent direct contact to skin, eyes, and clothes.
Waste disposal method:	Dispose of in accordance with all local, state, and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory protection:	If the work station is not properly ventilated to exhaust all fumes dusts, use a NIOSH approved mask for complete respiratory and protection.
Ventilation:	Maintain air flow away from user to remove all fumes and dusts, so the PEL is never exceeded. Adhere to environmental regulations exhausts.
Protective gloves:	Chemical and acid impervious
Eye protection:	Chemical tight safety goggles. Do NOT wear contact lenses.
Other protective equipment:	Full protective equipment normally used in a braze/soldering opera so as to prevent any contact.

IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage:	Store flux at ambient conditions - keep containers tightly closed and a from foodstuffs. Wash thoroughly after handling to remove all residue eating or smoking in work area.
Other precautions:	Do NOT breathe fumes. Professionally wash contaminated clothing be re-use. Existing lung disorders will have increased toxic susceptibility

X. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg):	~212
Specific gravity (H_2O = 1 @ 72°F):	1.75
Vapor density (air = 1):	N/A
Vapor pressure:	N/A
Percent volatiles by volume:	N/A
Solubility in water:	Moderate
Evaporation rate (butyl acetate = 1):	N/A