SAFETY DATA SHEET

CHEMALLOY CO. LLC
P.O. BOX 350
BRYN MAWR, PA 19010-0350

CHEMICAL NAME: Cryolite - Synthetic
"Sodium Aluminum Fluoride"
COMMON/TRADE NAME: CRYOFLUX® SC-200/SC-325
AG-200/AG-325

SECTION 1 - IDENTIFICATION

Product Identifier CRYOFLUX® Powder
Other Name(s) CRYOFLUX® SC-200/SC-325; CRYOFLUX® AG-200/AG-325; Synthetic Cryolite Powder
Recommended use Manufacturing and Welding
Restrictions for use Commercial use only, not for human consumption

Manufacturer Name Chemalloy Company LLC
Address PO Box 350
Bryn Mawr, PA 19010

Telephone (610) 527-3700
Fax No. (610) 527-3878
Emergency Phone (800) 424-9300 (Chemtrec)
Contract No. CCN 4453

SECTION 2 - HAZARD(S) IDENTIFICATION

Hazardous Classification per 29CFR 1910.1200 (Rev. July 1, 2012)
Acute Toxicity - Inhalation (Category 4)
Specific target organ toxicity - repeated exposure (Category 1)
Reproductive toxicity: Additional category for effects on or via lactation

Other Hazards not classified Hazardous to the aquatic environment - Chronic Hazard (Category 2)

Signal Word DANGER

Hazard pictograms

Hazard Statements
Harmful if Inhaled
Causes damage to bone and teeth through prolonged or repeated exposure.
May cause harm to breast-fed children
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention
Do Not breathe dust/fume/gas/mist/vapors/spray.
Use only in a well-ventilated area or outdoors
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid contact during pregnancy/while nursing.
Avoid release to the environment.

Response
If inhaled: Move person to fresh air and keep comfortable.
Seek medical advice/attention if feeling unwell, exposed or concerned.

Storage Keep product dry in suitable packaging, properly labeled and away from acids.

Disposal
Dispose of contents/container in accordance with local, state and federal regulations.
Avoid any release to the environment.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Formula	CAS No.	Concentration
Sodium Aluminum Fluoride	Na_3AlF_6	13775-53-6	97-99%

Common Names/Synonyms CRYOFLUX® Powder SC-200/SC-325, AG-200/AG-325; Synthetic Cryolite Powder

SECTION 4 - FIRST AID MEASURES

In case of inhalation	If inhaled: Move person to fresh air and keep comfortable. Seek medical advice/attention if feeling unwell, exposed or concerned. If victim is not breathing, and if assistance is trained, administer CPR.
In case of skin contact	If after contact, skin becomes irritated, remove contaminated clothes from victim. Wash the contaminated area with plenty of warm water and soap (for 15 minutes). If symptoms persist, seek medical attention and report substance contacting skin.
In case of eye contact	Flush eyes immediately with plenty of flowing water for 15 minutes holding eyelids open. If symptoms persist, seek medical attention and report substance irritating eyes.
In case of ingestion	Obtain immediate medical attention and report substance ingested. Do not give an unconscious victim anything to eat or drink, or try to induce vomiting.
Symptoms & Effects -acute	Irritation to the respiratory organs.
Symptoms & Effects -chronic	Chronic overexposure may cause teeth and bone structure deformation. There is also some evidence of reproductive abnormalities.
Immediate Medical Care	Treat symptomatically.

SECTION 5 - FIREFIGHTING MEASURES

Extinguishing media	Substance is not flammable or combustible, in case of fire use extinguishing media appropriate for the surrounding environment (i.e. ABC dry chemical)
Special hazards arising from substance or mixture	In case of fire toxic substances may be formed: Hydrogen Fluoride & oxides of Barium.
Special protective equipment & precautions for firefighters	Firefighters should wear full protective clothing and NIOSH approved self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	**For non-emergency personnel**: keep unprotected people away, allow only well trained personnel wearing suitable protective clothing to respond to the incident. **For emergency responders:** Avoid eye and skin contact; Do not inhale dust particles, and avoid the formation of dust.
Methods and materials for containment and clean-up	Collect the spilled material in mechanical way, then place into a suitable, closed, properly labelled chemical waste container for disposal. During disposal wear suitable personal protective equipment.
Environmental precautions	Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling	Observe conventional hygiene precautions, and after work hours, wash hands thoroughly. Avoid the direct contact with the product. Do not eat or smoke in the workplace. Ensure adequate ventilation and avoid formation of dust. Use Personal Protective Equipment as detailed in Section 8. Emptied containers may contain residues of product, which may be hazardous. Wet material should be handled with care, it may damage skin & mucous membranes.
Conditions for Safe Storage, including any incompatibilities	Keep product dry in suitable packaging, properly labeled and away from acids. Keep product away from food, beverages, luxury goods, feed, and pharmaceuticals. Follow all instructions on warning labels.
Precautions against fire and explosion	No special measures are required, substance will not burn.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Hazardous Component	CAS NO.	OSHA PEL	ACGIH TLV
Sodium Aluminum Fluoride	13775-53-6	2.5 mg/M^3 TWA (as F)	2.5 mg/M^3 TWA (as F)

Personal Protection Requirements

Respiratory: NIOSH approved respirators should be used when mechanical controls are not feasible.

Hand: Protective gloves are recommended for handling this material.

Eye: ANSI approved eye protection is recommended when handling this material.

Other/ Clothing: Appropriate work place clothing should be worn when handling this material, including a long-sleeved shirt buttoned at the neck and wrists.

Engineering Controls: Local exhaust/ventilation should be used when feasible to control dust levels below acceptable occupational exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/APPEARANCE Solid-off white powder	ODOR No odor	ODOR THRESHOLD No data available
pH 6.4 (in 1% aqueous solution)	MELTING PT 1000°C	INITIAL BOILING PT No data available
FLASH PT Not Applicable	EVAPORATION RATE Not Applicable	FLAMMABILITY (solid, gas) Non Flammable
UEL / LEL Not Applicable	VAPOR PRESSURE Not Applicable	VAPOR DENSITY Not Applicable
SPECIFIC GRAVITY/RELATIVE DENSITY 2.95 (H_2O=1)	SOLUBILITY (water) 0.4 g/l (20°C)	PARTITION COEFFICIENT Not Applicable
AUTO IGNITION TEMPERATURE Not Applicable	DECOMPOSITION TEMPERATURE No data available	VISCOSITY Not Applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity None known

Chemical Stability Stable at normal temperature & general work conditions

Possibility of Hazardous Reactions In case of heating (>1000°C) material will decompose, and toxic Aluminum Fluoride and Sodium Fluoride are formed.

Conditions to Avoid Avoid heating

Incompatible Materials Acids

Hazardous Decomposition Products Aluminum Fluoride, Sodium Fluoride, Hydrogen Fluoride

SECTION 11 -TOXICOLOGICAL INFORMATION

ACUTE TOXICITY Category 4 - inhalation	LD_{50} (inhalation-rat) > 1 mg/kg	LD_{50} (oral-rat) > 2000 mg/kg	ATE CALCULATIONS Not Applicable
SKIN CORROSION/IRRITATION None Known	SERIOUS EYE DAMAGE/EYE IRRITATION None Known		SKIN SENSITIZATION None Known
GERM CELL MUTAGENICITY None Known	CARCINOGENICITY (IARC, NTP, OSHA, ACGIH) None Known		REPRODUCTIVE TOXICITY Additional category for effects on or via lactation
STOT-SINGLE EXPOSURE None Known	STOT-REPEATED EXPOSURE Category 1 - teeth & bones		ASPIRATION HAZARD None Known

Likely Routes of Exposure Ingestion, Inhalation

SECTION 11 -TOXICOLOGICAL INFORMATION (cont.)

Symptoms related to Physical, Chemical, Toxicological Characteristics Irritation to the respiratory organs.

Immediate and Delayed effects from short-term and long-term exposure Chronic overexposure may cause teeth and bone structure deformation. There is also some evidence of reproductive abnormalities.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY	LC_{50} (fish)	EC_{50} (crustaceans)	NOEC (algae)
Hazardous to Aquatic environment - Chronic Hazard (Category 2)	47 mg/l/96h	5 mg/l/48h	5000 mg/l/96h

Persistence and Degradability Material should not be permitted to enter into waste water/sewer without dilution & neutralization.

Bioaccumulative potential No data available

Mobility in Soil Material can spread in aerosol form. Faint solubility and spreading, adsorption in organic sediment.

Other Adverse Effects No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in Sections 7 and 8.

Methods of Disposal Dispose of spillage and waste (product/packaging) in accordance with all local/regional national/ international regulations.

SECTION 14 -TRANSPORT INFORMATION

Proper Shipping Name Environmentally Hazardous Substance, Solid, N.O.S. (Synthetic Cryolite)

UN Number 3077 **Hazard Class** 9 **Packing Group** III

SECTION 15 - REGULATORY INFORMATION

TSCA Information

This chemical appears on the Toxic Substances Control Act (TSCA) inventory.

SARA Title III: Sec 302 Extremely Hazardous Substances, 40 CFR355

There are no extremely hazardous substances present in this material.

SARA Title III: Sec 311 and 312, MSDS Requirements

This material is subject to the reporting requirements for this regulation. Threshold planning quantity: 10,000 lbs.

SARA Title III: Sec 313, Toxic Chemicals Notification

This material is not subject to the annual reporting requirements for this regulation.

SECTION 16 -OTHER INFORMATION

Revision History 05/21/2015 - SDS formatted to 16-part GHS format, Supersedes 03/20/2014 MSDS revision