Chemical Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: **Ammonium bifluoride**

Other Name: **Ammonium Hydrogen difluoride**

Recommended use of the chemical and restrictions on use: This material can be used to produce glass etchants, disinfector, preservative and so on.

Supplier's details: **SHANDONG DONGYUE CHEMICAL CO.,LTD**
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SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Skin corrosion/irritation Category1

Serious eye damage/eye irritation Category 2

Specification target organ toxicity,single exposure Category 2(Inhalation,lung)

Specification target organ toxicity,repeated exposure Category 2(bone and tooth)

GHS Label elements, including precautionary statements

Signal word: Danger

Hazard statement(s): Causes severe skin burns and eye damage . May cause damage to organs(Inhalation,lung).May cause damage to organs through prolonged or repeated exposure (bone and tooth).

Precautionary statement(s):

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray.Wash hands and eyes thoroughly after handling.Wear protective gloves/protective clothing / eye protection/face protection .Do not eat,drink or smoke when using this product.

Response: IF SWALLOWED:Rinse mouth.Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.IF EXPOSED OR CONCERNED: Call a poison center/doctor.Get medical advice/attention if you feel unwell.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container to in accordance with national regulations.

Other hazards which do not result in classification: /

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Ammonium hydrogen difluoride	1341-49-7	98.17%

SECTION 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: /

Indication of immediate medical attention and special treatment needed： /

SECTION 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use foam, dry chemical power.

Special hazards arising from the chemical: The material is none-flammable.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.Avoid breathing vapors,mist or gas. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions: Do not enter into spillage area. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage ,and then collect in an clean container according to local regulations.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Wear Protective gloves/eye protection/ face protection/protective clothing.Avoid contact with skin and eyes.Avoid inhalation of vapor or mist.Keep away from sources of ignition-No smoking.

Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Source	Material	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	Peak ppm	Peak mg/m3	TWA F/CC	Notes
China(Hong Kong) Occupational Exposure limits	Ammonium hydrogen difluoride		2.5						

Appropriate engineering controls: Local exhaust ventilation or a process enclosure ventilation system may be required.

Personal protective equipment

Eye/face protection: Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin protection: Wear chemical protective gloves, eg. PVC. Wear safety footwear or safety gumboots, eg. Rubber. Impervious clothing.

Respiratory protection: Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.

Thermal hazards: /

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White solid crystal.
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	125°C
Initial boiling point and boiling range	239°C
Flash point	/
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	/
Vapour pressure	/
Vapour density	/
Relative density	1.5
Water solubility	630g/l (20°C)
Partition coefficient: noctanol/water	/
Autoignition temperature	/
Decomposition temperature	/
Viscosity	/

SECTION 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: /

Possibility of hazardous reactions: /

Conditions to avoid: /

Incompatible materials: Flammable materials and metal powder.

Hazardous decomposition products: /

SECTION 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled,swallowed,skin,eyes.

Inhalation: This materail may cause irritation and burns to the respiratory tract, symptoms may include coughing, sore throat, and labored breathing. May be absorbed through inhalation of dust; symptoms may parallel those from ingestion exposure. Irritation and burning effects may not appear immediately.

Ingestion: May cause salivation, nausea, vomiting, diarrhea, and abdominal pain, followed by symptoms of weakness, tremors, shallow respiration, carpopedal spasm, convulsions, and coma. May cause brain and kidney damage. Affects heart and circulatory system. Death may be caused by respiratory paralysis. Lethal dose estimated at between 1 teaspoonful and 1 oz.

Skin: Causes irritation and burns to the skin. Effects may not appear immediately.

Eyes: Causes irritation. May be extremely irritating with possible burns to eye tissue and permanent eye damage may result.

Symptoms related to the physical,chemical and toxicological characteristics:/

Acute health effects: Accidental ingestion of the material may be harmful and cause cough and throat pain. Oral intake is corrosive to the mouth and cause headache,giddiness,vomit and other symptoms.This material may produce skin and eyes burn.

Chronic health effects: Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva.

Numerical measures of toxicity(such as acute toxicity estimates):

Toxicity	Irritation
Oral(human) LDLo: 50mg/kg	
Oral(human) LDLo: 3 mg/kg	
Inhalation(rat) LC50:1276 ppm/1hr	
Inhalation(mouse)LC50 :342ppm/1hr	

SECTION 12 ECOLOGICAL INFORMATION

Toxicity：

Persistence and degradability: /

Bioaccumulative potential: Low.

Mobility in soil: /

Other adverse effects: /

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Burial in a land-fill specifically licensed to accept chemical.Reuse of broken container is forbidden.

SECTION 14 TRANSPORT INFORMATION

UN number: 1727.

UN proper shipping name: AMMONIUM HYDROGENDIFLUORIDE,SOLID.

Transport hazard class(es): 8.

Packaging group: II

Environmental hazards: /

Special precautions for user: /

SECTION 15 REGULATORY INFORMATION

Regulations：

This safety data sheet is in compliance with the following national standards: GB16483-2008，GB13690-2009， GB6944-2005， GB/T15098-2008， GB18218-2009， GB15258-2009，GB6944-2005，GB190-2009，GB191-2009，GB12268-2008，GA57-1993，GB/T 15098-2008，GBZ 2-2007as well as the following national regulations: Dangerous Goods Transport Administrative Regulation(Published by the ministry of Railways,2008), Dangerous Chemicals Safety Administrative Regulation(Published by the State Council,2011), United Nations Regulations on the Transport of Dangerous Goods (UN RTDG)

SECTION 16 OTHER INFORMATION

References UN Recommendations on the on the Transport of Dangerous Goods.
UN Globally Harmonized System of Classification and Labelling of Chemicals”

Form Date Mar-27-2020

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.