

### Dry Acid Salts 664

SDS Number: 105

Revision Date: 12/27/2014

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## 1 PRODUCT AND COMPANY IDENTIFICATION

### Manufacturer

ABC CO Products of Sacramento  
 P.O. Box 188469  
 Sacramento, CA 95818

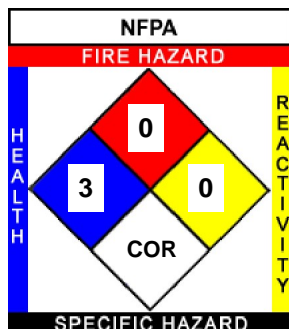
**Contact:** ABCO Products of Sacramento  
**Phone:** +1-916-447-9931  
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**Product Name:** Dry Acid Salts 664  
**Revision Date:** 12/27/2014  
**Version:** 1  
**SDS Number:** 105  
**Common Name:** Acid Fluoride Salts  
**CAS Number:** MIXTURE  
**Product Code:** ABCO J-664B  
**Chemical Family:** Inorganic Acid Salts  
**Chemical Formula:** \*\*\* PROPRIETARY \*\*\*  
**Product Use:** Source of Dry Acid Fluorides  
**Emergency Phone:** +1-800-424-9300 (CHEMTREC)

## 2 HAZARDS IDENTIFICATION

NFPA:  
 HMIS III:

Health = 3, Fire = 0, Reactivity = 0  
 H\*3/F0/PH0



HMIS III	
HEALTH	<input checked="" type="checkbox"/> 3
FLAMMABILITY	0
PHYSICAL HAZARDS	0
PERSONAL PROTECTION F   Safety Glasses, Gloves, Apron, Dust Respirator	

PERSONAL PROTECTION INDEX			
A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for "SPECIAL" handling directions
A		n	
O		p	
q		r	
s		Additional information	
t		u	
w		y	
z			

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GHS Signal Word:

DANGER

GHS Hazard Pictograms:



GHS Classifications:

Physical, Corrosive to Metals, 1

Health, Acute toxicity, 2 Oral

Health, Skin corrosion/irritation, 1 B

GHS Phrases:

H290 - May be corrosive to metals

H300 - Fatal if swallowed

H314 - Causes severe skin burns and eye damage

GHS Precautionary Statements:

P234 - Keep only in original container.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P262 - Do not get in eyes, on skin, or on clothing.

P264 - Wash skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 - Specific treatment (see supplemental first aid instructions on this label).

P332+313 - If skin irritation occurs: Get medical advice/attention.

P337+313 - If eye irritation persists: Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P391 - Collect spillage. Hazardous to the aquatic environment.

P403+233 - Store in a well ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container to an approved waste disposal plant.

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### 3 COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients:**

Cas #	Percentage	Chemical Name
7681-38-1	80-90%	Sulfuric acid, monosodium salt
7681-49-4	0-10%	Sodium fluoride
1341-49-7	0-10%	Ammonium hydrogendifluoride, solid
N/A	0-10%	Proprietary, non-hazardous, non-regulated

### 4 FIRST AID MEASURES

**Inhalation:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. Give oxygen or artificial respiration if needed. Lie victim down in the recovery position; cover to keep warm. Physicians should treat chronic exposure as chemical pneumonia. A 2.5% calcium gluconate solution in normal saline administered by nebulizer, or by IPPB with 100% oxygen may decrease pulmonary damage. Bronchodilators may also be administered. Monitor for hypocalcemia.

**Skin Contact:** Get immediate medical attention. Remove contaminated clothing immediately; wash before reuse. Promptly flush skin with water until all chemical is removed. Immediately apply Calcium Gluconate gel, 2.5%, and massage into the affected area using rubber gloves. Continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. If fingers/finger nails are touched, even if there is not pain, dip them in a bath of 5% Calcium Gluconate for 15 to 20 minutes. More serious skin exposure may require subcutaneous calcium gluconate gel, except for digital areas (unless the physician is experienced in this technique) due to potential for tissue injury from increased pressure. Absorption can readily occur in subungual areas and should be considered during decontamination.

**Eye Contact:** Get immediate medical attention. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Rinse to eyes with a calcium gluconate, 1%, solution in physiological serum (10 ml of Calcium Gluconate 10% in 90 ml of physiological serum). In the case of difficulty of opening eyelids, administer an analgesic eye wash (oxybuprocaine).

**Ingestion:** Call a physician immediately. Take victim immediately to hospital. Prevention of absorption of the Fluoride ion can be obtained by giving a source of Calcium or Magnesium.

If victim is conscious:

If swallowed, rinse mouth with water (only if the person is conscious). Give to drink one of the following: 3-4 glasses of milk, chewable calcium carbonate tablets, Milk of Magnesia or a 1% aqueous Calcium Gluconate solution. Do NOT induce vomiting. Artificial respiration and/or oxygen may be necessary.

If victim is unconscious, but breathing:

Artificial respiration and/or oxygen may be necessary.

**General advice:**

Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After initial decontamination with water, subsequent damage can occur due to penetration/absorption of the Fluoride (F<sup>-</sup>) ion. Treatment should be directed toward binding the Fluoride ion as well as the effects of exposure. Show this Safety Data Sheet to the doctor in attendance. If possible, call ahead to hospital or paramedics and make them aware of the Hydrofluoric acid exposure risk to themselves, and so they may prepare the proper first aid treatments ahead of time. Conditions such as hypocalcemia, hypomagnesemia, cardiac arrhythmias and hyperkalemia should be monitored for, since they can occur after exposure. Renal dialysis may be necessary in some cases.

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

The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11.

**Indication of any immediate medical attention and special treatment needed:**

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No data available.

## 5 FIRE FIGHTING MEASURES

<b>Flammability:</b>	No data available
<b>Flash Point:</b>	DNA
<b>Flash Point Method:</b>	DNA
<b>Burning Rate:</b>	No data available
<b>Autoignition Temp:</b>	No data available
<b>LEL:</b>	DNA
<b>UEL:</b>	DNA

### Extinguishing Media:

Water Spray  
Carbon Dioxide  
Alcohol-Resistant Foam  
Dry Chemical

### Special Hazards Arising From the Substance or Mixture:

Ammonia  
Hydrogen Fluoride  
Nitrogen Oxides (NO<sub>x</sub>)  
Sodium Oxides  
Sulfur Oxides

### Advice for Firefighters:

Firefighters should wear full-face, positive-pressure respirators.

### Further Information:

If incinerated, may release toxic fumes.  
Use water spray to cool unopened containers.  
See Section 7 for more information on safe handling.  
See Section 8 for more information on personal protection equipment.  
See Section 13 for disposal information.

## 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment, including dust respirator.  
Avoid dust formation.  
Avoid breathing dust.  
Keep from contacting skin or eyes.  
Avoid breathing vapors, mist or gas.  
Ensure adequate ventilation.  
Evacuate personnel to safe areas.

### Environmental precautions:

Prevent further release (leakage/spillage) if safe to do so.  
Do not allow product to enter drains.  
Do not allow to drain to environment.

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**Methods and materials for containments and cleaning up:**

Pick up and arrange disposal without creating dust.  
Sweep up, shovel or collect spillage with an electrically protected vacuum cleaner.  
Place contaminated material into suitable, closed containers for disposal.  
Dispose of contaminated material according to Section 13.  
After spillage has been collected, area may be flushed with water or wet-brushed.  
Ensure adequate ventilation.

**Reference to other sections:**

Comply with federal, state and local regulations on reporting spills.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on proper disposal.

**7****HANDLING AND STORAGE****Handling Precautions:**

Avoid formation of dust or aerosols.  
Avoid breathing vapors, mist or dust.  
Avoid contact with eyes, skin, or clothing.  
Use approved, plastic containers only - do not store in metal containers.  
Do not use Silicate containing materials for handling material (glass, cement, etc.).  
Keep containers closed when not in use.  
Do not expose containers to open flame, excessive heat, or direct sunlight.  
Do not puncture or drop containers.  
Handle with care and avoid spillage on the floor.  
Keep material out of reach of children.  
Keep material away from incompatible materials.  
Do not use corrosive-sensitive materials for handling product.  
Wash thoroughly after handling.  
Ensure adequate ventilation.

**Storage Requirements:**

Keep away from heat, sparks and flames.  
Do not store in direct sunlight.  
Store away from strong acids, strong bases, strong oxidizing agents, metals, powdered metals, organic materials, Alkali metals, Alkaline earth metals, Silicate containing materials (glass, cement, etc.), water and steam.

**8****EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering Controls:**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

**Personal Protective Equip:**

Eye/face protection:  
When using material use safety glasses, gloves, apron and dust respirator according to HMIS PP, F. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

## Skin protection:

Handle with gloves made from Viton, Nitrile, PVC or Buma rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to

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avoid skin contact. Dispose of contaminated gloves according to applicable laws and laboratory practices.

**Body Protection:**

Chemically resistant safety glasses, gloves, apron and dust respirator are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.

**Respiratory protection:**

Full-face dust respirator is highly recommended as a backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.

**Control of environmental exposure:**

Prevent leakage or spillage if safe to do so. Do not let material enter drains.

**Components with workplace control parameters:**

Component(s): Sodium Fluoride; Ammonium Hydrogendifluoride, solid  
 CAS-No(s): 7681-49-4; 1341-49-7  
 USA OSHA Table Z-1 Limits for Air Contaminants (TWA): 2.5 mg/m<sup>3</sup> (as F)  
 USA OSHA Table Z-1-A: 2.5 mg/m<sup>3</sup> (as F)  
 USA OSHA Table Z2 (TWA): 2.5 mg/m<sup>3</sup> (as F)  
 USA ACGIH (TWA/TLV): 2.5 mg/m<sup>3</sup> (as F)  
 USA NIOSH Recommended Exposure Limits (TWA): 2.5 mg/m<sup>3</sup> (as F)

**Biological occupational exposure limits:**

Component: Sodium Fluoride; Ammonium Hydrogendifluoride, solid  
 CAS-No: 7681-49-4; 1341-49-7  
 Parameters: Fluorides  
 Biological Specimen: Urine  
 USA ACGIH Biological Exposure Indices: Prior to shift (16 hours after exposure ceases), 3 mg/g  
 USA ACGIH Biological Exposure Indices: End of shift (As soon as possible after exposure ceases), 3 mg/g

**9**

**PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	White, Granular Powder	<b>Odor:</b>	Characteristic
<b>Physical State:</b>	Solid	<b>Molecular Formula:</b>	MIXTURE
<b>Odor Threshold:</b>	Not determined	<b>Solubility:</b>	100%
<b>Particle Size:</b>	Not determined	<b>Softening Point:</b>	Not determined
<b>Spec Grav./Density:</b>	Not determined	<b>Percent Volatile:</b>	DNA
<b>Viscosity:</b>	Not determined	<b>Heat Value:</b>	Not determined
<b>Sat. Vap. Conc.:</b>	DNA	<b>Freezing/Melting Pt.:</b>	Not determined
<b>Boiling Point:</b>	Not determined	<b>Flash Point:</b>	DNA
<b>Flammability:</b>	(solid, gas): Not determined	<b>Octanol:</b>	DNA
<b>Partition Coefficient:</b>	Not determined	<b>Vapor Density:</b>	(air = 1): DNA
<b>Vapor Pressure:</b>	(mm Hg @ 20 °C, air = 1): DNA	<b>VOC:</b>	DNA
<b>pH:</b>	@ 1%: < 1.0	<b>Bulk Density:</b>	Not determined
<b>Evap. Rate:</b>	DNA	<b>Auto-Ignition Temp:</b>	Not determined
<b>Molecular weight:</b>	MIXTURE	<b>UFL/LFL:</b>	DNA
<b>Decomp Temp:</b>	Not determined		

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## 10 STABILITY AND REACTIVITY

<b>Stability:</b>	Product is stable under normal conditions.
<b>Conditions to Avoid:</b>	Incompatibilities, flames, ignition sources.
<b>Materials to Avoid:</b>	Strong acids, strong bases, strong oxidizing agents, metals, powdered metals, organic materials, Alkali metals, Alkaline earth metals, Silicate containing materials (glass, cement, etc.), water and steam.
<b>Hazardous Decomposition:</b>	Ammonia, Hydrogen Fluoride, Nitrogen Oxides (NO <sub>x</sub> ), Sodium Oxides and Sulfur Oxides.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11 TOXICOLOGICAL INFORMATION

**Component(s):** Sulfuric acid, monosodium salt; Sodium Fluoride; Ammonium Hydrogendifluoride, solid  
**CAS No(s):** 7681-38-1; 7681-49-4; 1341-49-7

### Acute Toxicity:

LD50 Oral - Rat: 31 mg/kg

TDLo Oral - Human: 0.214 mg/kg

TDLo Oral - Human Female: 7 mg/kg

LD50 Intravenous - Rat: 26 mg/kg

**Skin Corrosion/Irritation:** Irritating to skin.**Serious Eye Damage/Eye Irritation:** Rabbit eyes - Risk of serious damage to eyes.**Respiratory or Skin Sensitation:** No data available.**Germ Cell Mutagenicity:** No data available.

### Carcinogenicity:

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or OSHA classification.

**IARC:** 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium Fluoride).**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**Reproductive Toxicity:** Foetotoxic effect - Effect on fertility.**Specific Target Organ Toxicity - Single Exposure:** No data available.**Specific Target Organ Toxicity - Repeated Exposure:** No data available.**Aspiration Hazard:** No data available.

### Additional Information:

Component: Sulfuric acid, monosodium salt; RTECS: VZ1860000



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Component: Sodium Fluoride; RTECS: WB0350000

Component: Ammonium Hydrogendifluoride, solid; RTECS: BQ9200000

**12****ECOLOGICAL INFORMATION****Component(s):** Sulfuric acid, monosodium salt; Sodium Fluoride; Ammonium Hydrogendifluoride, solid**CAS No(s):** 7681-38-1; 7681-49-4; 1341-49-7**Toxicity:***Toxicity to fish:*

LC50 - Salmo gairdneri: 51 mg/l (96 h, Fluorides)

LC50 - Salmo gairdneri: 2.7 - 4.7 mg/l (21 days, Fluorides)

LC50 - Oncorhynchus mykiss (Rainbow Trout): 200 mg/l (96 h)

Mortality NOEC - Cyprinodon variegatus (Sheepshead Minnow): 500 mg/l (96 h)

*Toxicity to daphnia and other aquatic invertebrates (salt water):*

EC50 - Crustaceans, Mysidopsis: 10.5 mg/l (96 h, Fluorides)

*Toxicity to daphnia and other aquatic invertebrates (fresh water):*

EC50 - Daphnia magna (Water flea) : 97 mg/l (48 h, Fluorides)

NOEC - Crustaceans, Daphnia magna (Water flea) : 3.7 mg/l (21 days, Fluorides)

*Toxicity to algae*

EC50 - Algae, Scenedesmus sp.: 43 mg/l (96 h, Fluorides)

**Persistence and Degradability:***Abiotic degradation:*

Air: Neutralization by natural alkalinity.

Water/Soil: Ionization/neutralization.

Water/Soil: Complexation/precipitation of inorganic materials.

*Biodegradation:*

Not required/conducted.

**Bioaccumulative potential:**

Bioaccumulation - Salmo Trutta: 5 mg/l (10 d)

Bioconcentration Factor (BCF): 2.3

Result(log Pow): Accumulation into vegetable leaves.

Result (Fluorides): Not applicable.

**Mobility in Soil:**

Result (Fluorides): Potential adsorption.

**Results of PBT and vPvB assessment:**

Not required/conducted.

**Other Adverse Effects:**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.



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## 13 DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of as unused product.

## 14 TRANSPORT INFORMATION

UN #: UN 2923, Class: 8 (6.1), Proper Shipping Name: Corrosive solids, toxic, n.o.s. (containing Sodium Fluoride and Ammonium Hydrogendifluoride, solid)

### DOT (US)

UN Number: 2923

Class: 8 (6.1)

Packing Group: II

ERG #: 154

Proper Shipping Name: Corrosive solids, toxic, n.o.s. (containing Sodium Fluoride and Ammonium Hydrogendifluoride, solid)

Marine Pollutant: No

Poison Inhalation Hazard(s): No

### IMDG

UN Number: 2923

Class: 8 (6.1)

Packing Group: II

EMS-No: F-A, S-B

Proper Shipping Name: Corrosive solids, toxic, n.o.s. (containing Sodium Fluoride and Ammonium Hydrogendifluoride, solid)

Marine Pollutant: No

### IATA

UN Number: 2923

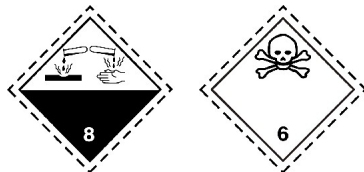
Class: 8 (6.1)

Packing Group: II

ERG #: 154

Proper Shipping Name: Corrosive solids, toxic, n.o.s. (containing Sodium Fluoride and Ammonium Hydrogendifluoride, solid)

Marine Pollutant: No



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## 15 REGULATORY INFORMATION

### COMPONENT / (CAS/PERC) / CODES

\*Sulfuric acid, monosodium salt (7681381 80-90%) NJHS, PA, SARA311/312, TSCA

\*Sodium fluoride (7681494 0-10%) CERCLA, CSWHS, MASS, NJHS, PA, SARA311/312, TSCA

\*Ammonium hydrogendifluoride, solid (1341497 0-10%) CERCLA, CSWHS, MASS, NJHS, PA, SARA311/312, TSCA

### REGULATORY KEY DESCRIPTIONS

CERCLA = superfund clean up substance  
CSWHS = Clean water Act Hazardous substances  
MASS = MA Massachusetts Hazardous Substances List  
NJHS = NJ Right-to-Know Hazardous Substances  
PA = PA Right-To-Know List of Hazardous Substances  
SARA311/312 = SARA 311/312 Toxic Chemicals  
SARA313 = SARA 313 Title III Toxic Chemicals  
TSCA = Toxic Substances Control Act

## 16 OTHER INFORMATION

### Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that ABCO Products of Sacramento believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of ABCO Products of Sacramento's control, ABCO Products of Sacramento makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.

### Preparation Information:

GHS Conversion Services  
www.ghsconversionservices.com  
(669) 236-0304