

The Version Date and Number for this MSDS is : 12/12/2007 - #007

PRODUCT NAME: SODIUM FLUORIDE
MSDS NUMBER: MZS3722
DATE ISSUED: 12/10/2007
SUPERSEDES: 06/05/2007
ISSUED BY: 008614

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SODIUM FLUORIDE

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1. PRODUCT IDENTIFICATION

SYNONYMS: FLORIDINE; SODIUM MONOFLUORIDE; DISODIUM DIFLUORIDE;
NATRIUM FLUORIDE; FLOROCID
CAS NO: 7681-49-4
MOLECULAR WEIGHT: 41.99
CHEMICAL FORMULA: NAF

Distributed by:
Univar USA Inc.
17425 NE Union Hill Road
Redmond, WA 98052
425-889-3400

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2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO	PERCENT	HAZARDOUS
SODIUM FLUORIDE	7681-49-4	100%	YES

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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! MAY BE FATAL IF SWALLOWED OR INHALED. AFFECTS RESPIRATORY SYSTEM,
HEART, SKELETON, CIRCULATORY SYSTEM, CENTRAL NERVOUS SYSTEM AND KIDNEYS.
CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. IRRITATION EFFECTS
MAY BE DELAYED.

Annotation:

POTENTIAL HEALTH EFFECTS

IF INHALED OR SWALLOWED, THIS COMPOUND CAN CAUSE FLUORIDE POISONING. EARLY SYMPTOMS INCLUDE NAUSEA, VOMITING, DIARRHEA, AND WEAKNESS. LATER EFFECTS INCLUDE CENTRAL NERVOUS SYSTEM EFFECTS, CARDIOVASCULAR EFFECTS AND DEATH.

INHALATION:

CAUSES SEVERE IRRITATION 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 EFFECTS MAY NOT APPEAR IMMEDIATELY.

INGESTION:

TOXIC! MAY CAUSE SALIVATION, NAUSEA, VOMITING, DIARRHEA, AND ABDOMINAL PAIN. SYMPTOMS OF WEAKNESS, TREMORS, SHALLOW RESPIRATION, CARDOPEDAL SPASM, CONVULSIONS, AND COMA MAY FOLLOW. MAY CAUSE BRAIN AND KIDNEY DAMAGE. AFFECTS HEART AND CIRCULATORY SYSTEM. DEATH MAY OCCUR FROM RESPIRATORY PARALYSIS. ESTIMATED LETHAL DOSE = 5-L0 GRAMS.

SKIN CONTACT:

CAUSES IRRITATION, WITH REDNESS AND PAIN. SOLUTIONS ARE CORROSIVE. EFFECTS MAY NOT APPEAR IMMEDIATELY.

EYE CONTACT:

EYE IRRITANT! MAY CAUSE IRRITATION AND SERIOUS EYE DAMAGE. EFFECTS MAY NOT IMMEDIATELY APPEAR.

CHRONIC EXPOSURE:

CHRONIC EXPOSURE MAY CAUSE MOTTLING OF TEETH AND BONE DAMAGE (OSTEOSCLEROSIS) AND FLUOROSIS. SYMPTOMS OF FLUOROSIS INCLUDE BRITTLE BONES, WEIGHT LOSS, ANEMIA, CALCIFIED LIGAMENTS, GENERAL ILL HEALTH AND JOINT STIFFNESS.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

POPULATIONS THAT APPEAR TO BE AT INCREASED RISK FROM THE EFFECTS OF FLUORIDE ARE INDIVIDUALS THAT SUFFER FROM DIABETES INSIPIDUS OR SOME FORMS OF RENAL IMPAIRMENT.

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4. FIRST AID MEASURES

FIRST AID PROCEDURES SHOULD BE PRE-PLANNED FOR FLUORIDE COMPOUND EMERGENCIES.

INHALATION:

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN IMMEDIATELY.

INGESTION:

Annotation:

ADMINISTER MILK, CHEWABLE CALCIUM CARBONATE TABLETS OR MILK OF MAGNESIA.
NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN
IMMEDIATELY.

SKIN CONTACT:

WIPE OFF ANY EXCESS MATERIAL FROM SKIN AND THEN IMMEDIATELY FLUSH SKIN WITH
LARGE AMOUNTS OF SOAPY WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH
CLOTHING BEFORE RE-USE. APPLY BANDAGES SOAKED IN MAGNESIUM SULFATE. CALL A
PHYSICIAN IMMEDIATELY.

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH GENTLE BUT LARGE STREAM OF WATER FOR AT LEAST
15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. CALL A PHYSICIAN
IMMEDIATELY.

NOTE TO PHYSICIAN:

FOR LARGE EXPOSURES, SYSTEMIC EFFECTS (HYPOCALCEMIA AND HYPOMAGNESIA) MAY
OCCUR.

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5. FIRE FIGHTING MEASURES

FIRE:

NOT CONSIDERED TO BE A FIRE HAZARD.

EXPLOSION:

NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

FIRE EXTINGUISHING MEDIA:

USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

SPECIAL INFORMATION:

IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED
SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE
PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

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6. ACCIDENTAL RELEASE MEASURES

VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE
EQUIPMENT AS SPECIFIED IN SECTION 8. SPILLS: PICK UP AND PLACE IN A
SUITABLE CONTAINER FOR RECLAMATION OR DISPOSAL, USING A METHOD THAT DOES
NOT GENERATE DUST. US REGULATIONS (CERCLA) REQUIRE REPORTING SPILLS AND
RELEASES TO SOIL, WATER AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE
TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800)
424-8802.

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Annotation:

7. HANDLING AND STORAGE

KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. SEPARATE FROM ACIDS AND OXIDIZING MATERIALS. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (DUST, SOLIDS); OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

-OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):

2.5 MG(F)/M3 (TWA)

-ACGIH THRESHOLD LIMIT VALUE (TLV):

2.5 MG(F)/M3 (TWA)

VENTILATION SYSTEM:

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES", MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS (NIOSH APPROVED):

IF THE EXPOSURE LIMIT IS EXCEEDED AND ENGINEERING CONTROLS ARE NOT FEASIBLE, A HALF FACEPIECE PARTICULATE RESPIRATOR (NIOSH TYPE N95 OR BETTER FILTERS) MAY BE WORN FOR UP TO TEN TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST.. A FULL-FACE PIECE PARTICULATE RESPIRATOR (NIOSH TYPE N100 FILTERS) MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT, OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY, OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. IF OIL PARTICLES (E.G. LUBRICANTS, CUTTING FLUIDS, GLYCERINE, ETC.) ARE PRESENT, USE A NIOSH TYPE R OR P FILTER. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

SKIN PROTECTION:

WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

EYE PROTECTION:

USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

Annotation:

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: BOILING POINT:
WHITE CRYSTALS. 1700C (3092F)

ODOR: MELTING POINT:
ODORLESS. 993C (1819F)

SOLUBILITY: VAPOR DENSITY (AIR=1):
4 G/100 ML WATER @ 15C (59F) NO INFORMATION FOUND.

SPECIFIC GRAVITY: VAPOR PRESSURE (MM HG):
2.78 1 @ 1077C (1971F)

PH: EVAPORATION RATE (BUAC=1):
NO INFORMATION FOUND. NO INFORMATION FOUND.

% VOLATILES BY VOLUME @ 21C (70F):
0

10. STABILITY AND REACTIVITY

STABILITY:
STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

HAZARDOUS DECOMPOSITION PRODUCTS:
BURNING MAY PRODUCE HYDROGEN FLUORIDE VAPORS.

HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

INCOMPATIBILITIES:
REACTS WITH ACIDS TO FORM HYDROGEN FLUORIDE.

CONDITIONS TO AVOID:
NO INFORMATION FOUND.

11. TOXICOLOGICAL INFORMATION

ORAL RAT LD50: 52 MG/KG; EYE RABBIT (STANDARD DRAIZE) 20MG/24-HR, MODERATE;
INVESTIGATED AS A TUMORIGEN, MUTAGEN, REPRODUCTIVE EFFECTOR

-----/CANCER LISTS/-----

-----NTP CARCINOGEN-----

INGREDIENT	KNOWN	ANTICIPATED	IARC CATEGORY
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Annotation:

PROPER SHIPPING NAME: SODIUM FLUORIDE, SOLID
HAZARD CLASS: 6.1
UN/NA: UN1690 PACKING GROUP: III

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15. REGULATORY INFORMATION

-----/CHEMICAL INVENTORY STATUS - PART 1/-----
INGREDIENT TSCA EC JAPAN AUSTRALIA

SODIUM FLUORIDE (7681-49-4) YES YES YES YES

-----/CHEMICAL INVENTORY STATUS - PART 2/-----
--CANADA--
INGREDIENT KOREA DSL NDSL PHIL.

SODIUM FLUORIDE (7681-49-4) YES YES NO YES

-----/FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 1/-----
-SARA 302- -SARA 313-----
INGREDIENT RQ TPQ LIST CHEMICAL CATG

SODIUM FLUORIDE (7681-49-4) NO NO NO NO

-----/FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 2/-----
-RCRA- -TSCA-
INGREDIENT CERCLA 261.33 8 (D)

SODIUM FLUORIDE (7681-49-4) 1000 NO NO

CHEMICAL WEAPONS CONVENTION: YES TSCA 12(B): NO CDTA: NO
SARA 311/312: ACUTE: YES CHRONIC: YES FIRE: NO PRESSURE: NO
REACTIVITY: NO (PURE / SOLID)

AUSTRALIAN HAZCHEM CODE: 2Z
POISON SCHEDULE: S2

WHMIS: THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF
THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS
ALL OF THE INFORMATION REQUIRED BY THE CPR.

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16. OTHER INFORMATION

NFPA RATINGS:
HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 0

Univar USA Inc Material Safety Data Sheet

For Additional Information contact MSDS Coordinator during business hours, Pacific time: (425) 889-3400

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The Public Health and Safety Organization

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NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

Solvay Fluorides, LLC.

3333 Richmond Avenue

Houston, TX 77098

United States

800-325-3332

713-525-6500

Facility : Distribution Center - Southgate, CA

Fluosilicic Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluosilicic Acid	Fluoridation	6mg/L
Hydrofluosilicic Acid	Fluoridation	6mg/L

Facility : Distribution Center - Stockton, CA**Fluosilicic Acid****Trade Designation**

Fluosilicic Acid

Product Function

Fluoridation

Max Use

6mg/L

Hydrofluosilicic Acid

Fluoridation

6mg/L

Facility : Alorton, IL**Fluosilicic Acid****Trade Designation**

Fluosilicic Acid

Product Function

Fluoridation

Max Use

6mg/L

Hydrofluosilicic Acid

Fluoridation

6mg/L

Sodium Fluoride**Trade Designation**

Sodium Fluoride

Product Function

Fluoridation

Max Use

2.3 mg/L

Facility : Distribution Center - East Chicago, IN**Fluosilicic Acid****Trade Designation**

Fluosilicic Acid

Product Function

Fluoridation

Max Use

6mg/L

Facility : Distribution Center - Boston, MA**Fluosilicic Acid****Trade Designation**

Fluosilicic Acid

Product Function

Fluoridation

Max Use

6mg/L