

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 171212

NAME: Zinc nitrate hexahydrate

SYNONYMS:

24 HOUR EMERGENCY

Within USA/Canada: +1 800-633-8253

TELEPHONE:

Outside USA/Canada: +1 801-629-0667

TO REQUEST AN MSDS: +1 888-535-2444

CUSTOMER

+1 888-535-2444

SERVICE:

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

OXIDIZING SOLIDS (CATEGORY 2), H272

ACUTE TOXICITY, ORAL (CATEGORY 4), H302

SKIN IRRITATION (CATEGORY 2), H315

EYE IRRITATION (CATEGORY 2A), H319

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3),

RESPIRATORY SYSTEM, H335

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H272 MAY INTENSIFY FIRE; OXIDISER. H302 HARMFUL IF SWALLOWED.

H302 HARMFUL IF SWALLOWED. H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

H335 MAY CAUSE RESPIRATORY IRRITATION.

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT. P220 KEEP/STORE AWAY FROM CLOTHING/ COMBUSTIBLE MATERIALS. P221 TAKE ANY PRECAUTION TO AVOID MIXING WITH COMBUSTIBLES. P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY. P264 WASH SKIN THOROUGHLY AFTER HANDLING. P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. P271 P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE PROTECTION. IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/ P301 + P312 + P330 PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH. IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER. P302 + P352IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT P304 + P340 + P312REST IN A POSITION COMFORTABLE FOR BREATHING, CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. P305 + P351 + P338IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P332 + P313IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ ATTENTION. P337 + P313IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ ATTENTION. P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE. P370 + P378IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION. STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER P403 + P233TIGHTLY CLOSED. P405 STORE LOCKED UP. P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT. **HAZARDS NOT NONE OTHERWISE**

CLASSIFIED (HNOC) OR NOT COVERED

BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $Zn(NO_3)_2 \cdot 6H_2O$

MW: 297.48

CAS-NO. 10196-18-6

PURITY: $\geq 99\%$ (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT CLASSIFICATION CONCENTRATION
--

ZINC NITRATE HEXAHYDRATE		
	OX. SOL. 2; ACUTE TOX. 4; SKIN IRRIT. 2; EYE IRRIT. 2A; STOT SE 3; H272, H302, H315, H319, H335	<= 100%

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF

DANGEROUS AREA.

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.CONTINUE RINSING EYES DURING

TRANSPORT TO HOSPITAL.

IF SWALLOWED 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

THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

SECTION 2.2) AND/OR IN SECTION 11

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND

SPECIAL TREATMENT

NEEDED

NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

EXTINGUISHING MEDIA CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS
ARISING FROM THE
SUBSTANCE OR MIXTURE

ZINC/ZINC OXIDES

ADVICE FOR FIREFIGHTERS

WEAR SELF-CONTAINED BREATHING APPARATUS FOR

FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP SWEEP UP AND SHOVEL. CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13). KEEP IN SUITABLE,

CLOSED CONTAINERS FOR DISPOSAL.

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS.FURTHER

PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL

PROCESSING OCCURS.

PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.KEEP AWAY FROM

HEAT AND SOURCES OF IGNITION. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND

WELL-VENTILATED PLACE.

ANY HYGROSCOPIC.

INCOMPATIBILITIES STORAGE CLASS (TRGS 510): OXIDIZING HAZARDOUS

MATERIALS

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS CONTAINS NO SUBSTANCES WITH OCCUPATIONAL

EXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE

BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

SKIN PROTECTION

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE"S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

FULL CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

BODY PROTECTION COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE

TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF

THE DANGEROUS SUBSTANCE AT THE SPECIFIC

WORKPLACE.

RESPIRATORY PROTECTION

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS

NIOSH (US) OR CEN (EU).

CONTROL OF ENVIRONMENTAL EXPOSURE DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE White crystals

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE

MELTING

POINT/FREEZING POINT INITIAL BOILING POINT AND BOILING RANGE

FLASH POINT

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

WATER SOLUBILITY NO DATA AVAILABLE PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY NO DATA AVAILABLE EXPLOSIVE PROPERTIES NO DATA AVAILABLE

OXIDIZING PROPERTIES THE SUBSTANCE OR MIXTURE IS CLASSIFIED AS

OXIDIZING WITH THE CATEGORY 2.

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS

NO DATA AVAILABLE

CONDITIONS TO AVOID HYGROSCOPIC

INCOMPATIBLE POWDERED METALS, CYANIDES, SODIUM

MATERIALS HYPOPHOSPHITE, STANNOUS CHLORIDE, THIOCYANATES,

STRONG REDUCING AGENTS

HAZARDOUS OTHER DECOMPOSITION PRODUCTS - NO DATA

DECOMPOSITION AVAILABLE

PRODUCTS IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY LD50 ORAL - RAT - 1,190 MG/KG

DERMAL: NO DATA AVAILABLE

SKIN SKIN - RABBIT

CORROSION/IRRITATION RESULT: SEVERE SKIN IRRITATION - 24 H

SERIOUS EYE EYES - RABBIT

DAMAGE/EYE IRRITATION RESULT: MODERATE EYE IRRITATION - 24 H

RESPIRATORY OR SKIN

SENSITISATION

NO DATA AVAILABLE

GERM CELL NO DATA AVAILABLE

MUTAGENICITY

CARCINOGENICITY

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS

GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS

PROBABLE, POSSIBLE OR CONFIRMED HUMAN

CARCINOGEN BY IARC.

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

KNOWN OR ANTICIPATED 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 NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

TOXICITY - SINGLE

EXPOSURE

INHALATION - MAY CAUSE RESPIRATORY IRRITATION.

SPECIFIC TARGET ORGAN

TOXICITY - REPEATED

EXPOSURE

NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL RTECS: ZH4775000

INFORMATION FEVER, COUGH, NAUSEA, VOMITING, WEAKNESS

STOMACH - IRREGULARITIES - BASED ON HUMAN

EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY NO DATA AVAILABLE

PERSISTENCE AND

DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE

POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND

VPVB ASSESSMENT

PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL

SAFETY ASSESSMENT NOT REQUIRED/NOT

CONDUCTED

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCTBURN IN A CHEMICAL INCINERATOR EQUIPPED WITH

AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA

CARE IN IGNITING AS THIS MATERIAL IS HIGHLY

FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

DISSOLVE OR MIX THE MATERIAL WITH A

COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND

SCRUBBER.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: ZINC NITRATE

UN NUMBER: 1514 CLASS: 5.1 PACKING GROUP: II

REPORTABLE QUANTITY 1000 LBS

(RQ):

POISON INHALATION NO

HAZARD:

IMDG

PROPER SHIPPING NAME: ZINC NITRATE

UN NUMBER: 1514
CLASS: 5.1
PACKING GROUP: II
EMS-NO: F-H, S-Q

IATA

PROPER SHIPPING NAME: ZINC NITRATE

UN NUMBER: 1514 CLASS: 5.1 PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS THE FOLLOWING COMPONENTS ARE SUBJECT TO

REPORTING LEVELS ESTABLISHED BY SARA TITLE III,

SECTION 313:

CAS-NO. REVISION DATE

Zinc nitrate hexahydrate 10196-18-4/24/1993

SARA 311/312 HAZARDS REACTIVITY HAZARD, ACUTE HEALTH HAZARD,

CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

CAS-NO. **REVISION DATE**

Zinc nitrate hexahydrate 10196-18-6 4/24/1993

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. **REVISION DATE**

Zinc nitrate hexahydrate 10196-18-6 4/24/1993

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. **REVISION DATE**

10196-18-6 Zinc nitrate hexahydrate 4/24/1993

CALIFORNIA PROP. 65

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, **COMPONENTS**

BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

ACUTE TOX. **ACUTE TOXICITY EYE IRRITATION** EYE IRRIT.

H272 MAY INTENSIFY FIRE; OXIDISER. H302 HARMFUL IF SWALLOWED.

CAUSES SKIN IRRITATION. H315

H319 CAUSES SERIOUS EYE IRRITATION.

MAY CAUSE RESPIRATORY IRRITATION. H335

OX. SOL. **OXIDIZING SOLIDS** SKIN IRRIT. SKIN IRRITATION

HMIS RATING

HEALTH HAZARD: 3

CHRONIC HEALTH

HAZARD:

FLAMMABILITY: 0 PHYSICAL HAZARD

NFPA RATING

3 **HEALTH HAZARD:** 0 FIRE HAZARD: **REACTIVITY HAZARD:** 2 SPECIAL HAZARD.I: OX

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOLATILE ORGANIC COMPOUNDS VOC:

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL

HYGINISTS

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL AFG Bioscience LLC BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF AFG Bioscience LLC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.