



Univar USA Inc.
6100 Carillon Point
Kirkland, WA 98033
(425) 889-3400

For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

The Version Date for this MSDS is : 09/14/2004

PRODUCT NAME: SODIUM NITRATE

MSDS NUMBER: MZS4442

DATE ISSUED: 9/13/2004

SUPERSEDES: 4/5/2002

ISSUED BY: 008614

SODIUM NITRATE

1. PRODUCT IDENTIFICATION

SYNONYMS: NITRATINE; NITRIC ACID, SODIUM SALT; SODIUM SALTPETER;
SODIUM NITRATE, CRYSTAL

CAS NO: 7631-99-4

MOLECULAR WEIGHT: 84.99

CHEMICAL FORMULA: NaNO_3

Distributed by:

Univar USA Inc.

6100 Carillon Point

Kirkland, WA 98033

425-889-3400

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT CAS NO PERCENT HAZARDOUS

SODIUM NITRATE 7631-99-4 99 - 100% YES

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND
RESPIRATORY TRACT.

POTENTIAL HEALTH EFFECTS

INHALATION:

INHALATION OF DUST IRRITATES THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE
COUGHING, SHORTNESS OF BREATH.

INGESTION:

MAY CAUSE GASTROENTERITIS AND ABDOMINAL PAINS. OTHER SYMPTOMS MAY INCLUDE
DIZZINESS, BLOODY DIARRHEA, CONVULSIONS, AND COLLAPSE. PURGING AND DIURESIS
CAN BE EXPECTED. SMALL REPEATED DOSES MAY CAUSE HEADACHE AND MENTAL
IMPAIRMENT. RARE CASES OF NITRATES BEING CONVERTED TO THE MORE TOXIC
NITRITES HAVE BEEN REPORTED, MOSTLY WITH INFANTS.

SKIN CONTACT:

MAY CAUSE IRRITATION, SYMPTOMS INCLUDING REDNESS, ITCHING, AND PAIN.

EYE CONTACT:

MAY CAUSE IRRITATION, SYMPTOMS INCLUDING REDNESS, ITCHING, AND PAIN.

CHRONIC EXPOSURE:

UNDER SOME CIRCUMSTANCES METHEMOGLOBINEMIA OCCURS IN INDIVIDUALS WHEN THE
NITRATE IS CONVERTED BY BACTERIA IN THE STOMACH TO NITRITE. NAUSEA,
VOMITING, DIZZINESS, RAPID HEART BEAT, IRREGULAR BREATHING, CONVULSIONS,
COMA, AND DEATH CAN OCCUR SHOULD THIS CONVERSION TAKE PLACE.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

WORKERS WITH A HISTORY OF KIDNEY OR LUNG DISEASE MAY BE MORE SUSCEPTIBLE TO
THE EFFECTS OF THIS SUBSTANCE.

4. FIRST AID MEASURES

INHALATION:

REMOVE TO FRESH AIR. GET MEDICAL ATTENTION FOR ANY BREATHING DIFFICULTY.

INGESTION:

INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE
ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

SKIN CONTACT:

REMOVE ANY CONTAMINATED CLOTHING. WIPE OFF EXCESS FROM SKIN. WASH SKIN WITH SOAP AND WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

5. FIRE FIGHTING MEASURES

FIRE:

NOT COMBUSTIBLE, BUT SUBSTANCE IS A STRONG OXIDIZER AND ITS HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE IGNITION.

EXPLOSION:

EXPLOSIVE WITH SHOCK, HEAT OR FRICTION. SODIUM NITRATE DECOMPOSES EXPLOSIVELY WHEN HEATED > 538C (1000F). SENSITIVE TO MECHANICAL IMPACT.

FIRE EXTINGUISHING MEDIA:

USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL.

SPECIAL INFORMATION:

WEAR FULL PROTECTIVE CLOTHING AND BREATHING EQUIPMENT FOR HIGH-INTENSITY FIRE OR POTENTIAL EXPLOSION CONDITIONS. THIS OXIDIZING MATERIAL CAN INCREASE THE FLAMMABILITY OF ADJACENT COMBUSTIBLE MATERIALS.

6. ACCIDENTAL RELEASE MEASURES

REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8.

SPILLS: CLEAN UP SPILLS IN A MANNER THAT DOES NOT DISPERSE DUST INTO THE AIR. USE NON-SPARKING TOOLS AND EQUIPMENT. REDUCE AIRBORNE DUST AND PREVENT SCATTERING BY MOISTENING WITH WATER. PICK UP SPILL FOR RECOVERY OR DISPOSAL AND PLACE IN A CLOSED CONTAINER. SMALL AMOUNTS OF RESIDUE MAY BE FLUSHED TO SEWER WITH PLENTY OF WATER.

7. HANDLING AND STORAGE

KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE AND MOISTURE. ISOLATE FROM ANY SOURCE OF

HEAT OR IGNITION. AVOID STORAGE ON WOOD FLOORS. SEPARATE FROM INCOMPATIBLES, COMBUSTIBLES, ORGANIC OR OTHER READILY OXIDIZABLE 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:
NONE ESTABLISHED.

VENTILATION SYSTEM:

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES AS LOW AS POSSIBLE. 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):

FOR CONDITIONS OF USE WHERE EXPOSURE TO DUST OR MIST IS APPARENT AND ENGINEERING CONTROLS ARE NOT FEASIBLE, A PARTICULATE RESPIRATOR (NIOSH TYPE N95 OR BETTER FILTERS) MAY BE WORN. 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-FACE 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: BOILING POINT:
WHITE CRYSTALS. 380C (716F)

ODOR: MELTING POINT:
ODORLESS. 308C (586F)

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

SPECIFIC GRAVITY: VAPOR PRESSURE (MM HG):
2.26 NO INFORMATION FOUND.

PH: EVAPORATION RATE (BUAC=1):
AQUEOUS SOLUTION IS NEUTRAL. 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:
EMITS NITROUS OXIDES WHEN HEATED TO DECOMPOSITION.

HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR.

INCOMPATIBILITIES:
REACTS WITH ACIDS TO EMIT TOXIC FUMES OF NITROGEN DIOXIDE. CONTACT WITH THE FOLLOWING MAY CAUSE AN EXPLOSION: BARIUM RHODANIDE, BORON PHOSPHIDE, CYANIDES, SODIUM THIOSULFATE, SODIUM HYPOPHOSPHITE, SULFUR PLUS CHARCOAL, POWDERED ALUMINUM AND ALUMINUM OXIDE. FIBROUS ORGANIC MATERIAL SUCH AS JUTE, WOOD, AND SIMILAR CELLULOSIC MATERIALS CAN BECOME HIGHLY COMBUSTIBLE BY NITRATE IMPREGNATION.

CONDITIONS TO AVOID:
HEAT, FLAME, IGNITION SOURCES, SHOCK, FRICTION, INCOMPATIBLES.

11. TOXICOLOGICAL INFORMATION

ORAL RAT LD50: 1267 MG/KG. INVESTIGATED AS A TUMORIGEN, MUTAGEN, REPRODUCTIVE EFFECTOR.

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

---NTP CARCINOGEN---

INGREDIENT KNOWN ANTICIPATED IARC CATEGORY

SODIUM NITRATE (7631-99-4) NO NO NONE

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:
NO INFORMATION FOUND.

ENVIRONMENTAL TOXICITY:
NO INFORMATION FOUND.

13. DISPOSAL CONSIDERATIONS

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE AND SENT TO A RCRA APPROVED WASTE FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS.

DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

14. TRANSPORT INFORMATION

DOMESTIC (LAND, D.O.T.)

PROPER SHIPPING NAME: SODIUM NITRATE
HAZARD CLASS: 5.1
UN/NA: UN1498 PACKING GROUP: III

INTERNATIONAL (WATER, I.M.O.)

PROPER SHIPPING NAME: SODIUM NITRATE
HAZARD CLASS: 5.1
UN/NA: UN1498 PACKING GROUP: III

15. REGULATORY INFORMATION

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

SODIUM NITRATE (7631-99-4) YES YES YES YES

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

SODIUM NITRATE (7631-99-4) YES YES NO YES

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

SODIUM NITRATE (7631-99-4) NO NO NO NITRATE CMPD.

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

SODIUM NITRATE (7631-99-4) NO NO NO

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

AUSTRALIAN HAZCHEM CODE: 1(T)
POISON SCHEDULE: NONE ALLOCATED.

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.

16. OTHER INFORMATION

NFPA RATINGS:
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 1 OTHER: OXIDIZER

For Additional Information:
Contact: MSDS Coordinator - Univar USA
During business hours, Pacific Time - (425) 889-3400

NOTICE
Univar USA expressly disclaims all express or implied warranties of merchantability and fitness
for a particular purpose with respect to the product or information provided herein, and shall
under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product

specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar USA Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar USA makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar USA's control. Therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.

END OF MSDS