MATERIAL SAFETY DATA SHEET

GENIUM PUBLISHING CORPORATION
1145 CATALYN STREET
SCHENECTADY, NY 12303-1836 USA
(518) 377-8855

GENIUM PUBLISHING CORP.

NO. 101

SODIUM NITRATE

Date April 1982

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: SODIUM NITRATE
DESCRIPTION: Sodium salt of nitric acid; oxidizing agent
OTHER DESIGNATIONS: Nitratine, Soda Niter, $NaNO_3$, Chile Saltpeter, CAS #007 631 994
MANUFACTURER: Available from several suppliers, including: GE Material D4H5
Allied Chemical Co.
P.O. Box 1139R
Morristown, NJ 07960 Tel: (201) 455-4157

SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA
Sodium Nitrate	>99	No TLV Established Rat, Oral LDLo 200 mg/kg Human, Oral LDLo 500 mg/kg

SECTION III. PHYSICAL DATA

Boiling point, 1 atm --- (decomposes at 380C)
Vapor pressure, 20 C, mm Hg ------- negligible
Solubility in water, 15 C, g/100 cc ---- 81.5
Specific gravity (H_2O=1) --- 2.26
Melting point, deg C ------- 308
pH of aqueous solution -- neutral
Molecular weight -------- 85.0

Appearance and Odor: Colorless, transparent crystals or white powder, granules or other solid; odorless. Anhydrous salt is deliquescent in moist air.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER

Extinguishing Media: Water recommended, also fine sand. Use water to drench this oxidizing agent in early stages of a fire and to cool containers of oxidizer or fuel. When heated in a fire, it can melt; a water stream directed at the melt can scatter molten material, increasing the flammability of any combustible material it contacts (See Sect V). Sodium Nitrate can decompose explosively when heated to >1000F (538C). Firefighters should wear self-contained breathing apparatus and full protective clothing.

SECTION V. REACTIVITY DATA

This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not polymerize.
Sodium nitrate in contact with combustible and oxidizable substances can give violent combustion or explosion upon ignition. (It can be friction or shock sensitive.)
Incompatible with the following which can cause an explosion: barium rhodanide, boron phosphide, cyanides, sodium hypophosphite, sulfur plus charcoal, powdered aluminum or aluminum oxide, sodium thiosulphate. Fibrous organic material, jute, wood and similar cellulosic material can become highly combustible by nitrate impregnation.
Thermal degradation yields toxic nitrogen oxides.

SECTION VI. HEALTH HAZARD INFORMATION

TLV (See Sect II)

Inhalation of dust or mist may cause local irritation to the upper respiratory tract. Contact with eyes or skin may cause local irritation. This material is used as a food additive in very small amounts, but excessive ingestion may cause gastroenteritis, abdominal pains, vomiting and muscular weakness.

FIRST AID:

Eye Contact: Flush with running water for 15 min. including under the eyelids.

Skin Contact: Remove contaminated clothing. Wash affected area with water.

Inhalation: Remove to fresh air. Restore and/or support breathing as required. (Have trained person administer oxygen if breathing is difficult.)

Ingestion: If conscious, give 2-4 glasses of water and induce vomiting. Repeat until vomit fluid is clear.

Seek medical assistance for further treatment, observation and support.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of significant spills. Remove sources of heat or ignition. Clean-up personnel should have protection against contact and inhalation. Pick up spills promptly and place into appropriate closed containers for recovery or disposal. (If spilled material is intermixed with combustibles it may be desirable to wet with water and mix with wet sand before pick-up for disposal.) Flush residues to drain with large excess of water.

DISPOSAL: If allowable, scrap can be dissolved in a large amount of water and flushed to the drain with high dilution; otherwise, bury mixture diluted with wet sand in approved landfill.

Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide general ventilation in storage and workplace areas. Use local exhaust ventilation and/or wear approved respiratory protection where dusty or solution mist conditions prevail.

Avoid eye contact by use of chemical safety goggles where dusty or misty conditions occur. Wear protective clothing, hat, rubber gloves, etc, as needed to prevent repeated or prolonged skin exposures.

An eyewash station and washing facilities should be available near use area.

Clothing soiled with this oxidizing agent (as dust or from solution) can become highly flammable. (Use water, not fire blanket or smothering technique, to extinguish clothing fire.)

Workers with a history of kidney or lung disease should have physician approval before working with $NaNO_3$.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a cool, dry, ventilated low-fire risk area away from sources of heat and ignition and separated from combustible or readily oxidizable material. Avoid storing on wood floors. Use good housekeeping techniques. Avoid dust generation. Prevent dust accumulation.

Minimize skin contact. Avoid inhalation of dust or mist.

D.O.T. I.D. No. UN1498
LABEL: OXIDIZER (Rail) Yellow Label

DOT Classification: OXIDIZER
DATA SOURCE(S) CODE: 1,4-11,20,25,34

APPROVALS: MIS CRD J. M. Nielsen

Industrial Hygiene and Safety 4-1-82

MEDICAL REVIEW: 19 May 1982