

Fisher

Ammonium Nitrate
 01290
 **** MATERIAL SAFETY DATA SHEET ****

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****
 MSDS Name: Ammonium Nitrate
 Catalog Numbers: 07870711, S70711-1, A676-212, A676-3, A676-500, NC9579464,
 XX076100LB
 Synonyms: Nitric acid ammonium salt; nitram; ammonium salt; norway saltpeter
 Company Identification: Fisher Scientific
 1 Reagent Lane
 Fairlawn, NJ 07410
 For information, call: 201-796-7100
 Emergency Numbers: 201-796-7100
 For CHEMREC assistance: 201-796-7100
 For International CHEMREC assistance, call: 703-527-3887
 **** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
6484-52-2	Ammonium nitrate	> 98.0	229-347-8

Hazard Symbols: XI O
 Risk Phrases: 36/37/38 8
 **** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW
 Appearance: white to gray to brown solid.
 Danger: Strong oxidizer. Contact with other material may cause a
 methemoglobinemia. May cause eye and skin irritation.
 Target Organs: Red blood cells.

Potential Health Effects
 Eye: Causes eye irritation.
 Skin: May cause skin irritation.
 Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Methemoglobinemia is characterized by dizziness, drowsiness, headache, breath shortness, cyanosis with bluish skin, rapid heart rate and chocolate-brown colored blood.
 Inhalation: May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dypnea (labored breathing), and death. May cause irritation of breath and delayed lung edema. Methemoglobinemia is characterized by dizziness, drowsiness, headache, breath shortness, cyanosis with bluish skin, rapid heart rate and chocolate-brown blood. Inhalation can cause systemic acidosis and methemoglobinemia.
 Chronic: May cause methemoglobinemia, which is characterized by shortness of breath, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. May cause digestive tract disturbances.

**** SECTION 4 - FIRST AID MEASURES ****
 Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
 Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
 Ingestion: If victim is conscious and alert, give 2-4 cupsful of milk or water. Never give anything by mouth to an unconscious person. Get medical attention.
 Inhalation: Remove from exposure and move to fresh air immediately. If not giving oxygen, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
 Notes to Physician: Absorption of this product into the body may cause cyanosis (bluish discoloration of the face) due to oxygenation of the blood. Miscellaneous: Measures: Aggressive measures are needed only by supportive measures: bed rest and oxygen inhalation. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobinemia concentration in the blood. Cleansing of the entire contaminated area of the body is of utmost importance.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: Contact with combustible materials may cause a fire. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus (SCBA) to prevent contact with dust and vapors. Avoid contact with water. Do not use high pressure water. Do not use high temperatures, especially if contaminated.
 Extinguishing Media: Use water spray to cool fire-exposed containers. Use flooding quantities of water as spray.
 Autoignition Temperature: Not applicable.
 Flash Point: Not available.
 Explosion Limits, lower: Not available.
 Explosion Limits, upper: Not available.
 NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 3; Special: None.
 **** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****
 General Information: Use proper personal protective equipment as indicated in Section 8.
 Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the container's label and on this label. Avoid generating dusty conditions. Remove all sources of ignition.

**** SECTION 7 - HANDLING AND STORAGE ****
 Handling: Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor) which can be dangerous if exposed. Avoid contact with clothing and other combustible materials. Avoid ingestion and inhalation. Keep from contact with clothing and other combustible materials. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
 Storage: Keep away from sources of ignition. Do not store near combustible materials. Store in tightly closed containers in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Keep away from reducing agents. Do not store near alkaline substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****
 Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
 Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ammonium nitrate	none listed	none listed	none listed

OSHA Vacated PELs:
 Ammonium nitrate:
 No OSHA Vacated PELs are listed for this chemical.
 Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN156.
 Skin: Wear appropriate protective clothing to minimize contact with skin.
 Clothing: Wear appropriate protective clothing to minimize contact with skin.
 Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
 **** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: solid
 Color: white to gray to brown
 Odor: colorless
 pH: 5.4 (0.1 M solution)
 Vapor Pressure: Negligible.
 Vapor Density: Not available.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPO.
SARA Section 303
CAS # 6484-52-2: acute, flammable, reactive.
Section 313
None chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous
Substances under the CWA.
None of the chemicals in this product are listed as Priority
Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants
under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous
by OSHA.
STATE
Ammonium nitrate can be found on the following state right to know
lists: New Jersey, Pennsylvania, Massachusetts.
California No Significant Risk Level:
None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Xi C
Risk Phrases: R 36/37/38 Irritating to eyes, respiratory system
and skin.
R 8 Contact with combustible material may cause
fire.

Safety Phrases:
S 17 Keep away from combustible material.
S 25 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face
protection.
WGK (Water Danger/Protection)
United Kingdom Occupational Exposure Limits
United Kingdom Maximum Exposure Limits
Canada
CAS# 6484-52-2 is listed on Canada's DSL List.
This product has a WHMIS classification of C, D2B, F.
CAS# 6484-52-2 is not listed on Canada's Ingredient Disclosure List.
Exposure Limits

**** SECTION 16 - ADDITIONAL INFORMATION ****
MSDS Creation Date: 12/12/1997 Revision #4 Date: 3/18/2003
The information above is believed to be accurate and represents the best
information currently available to us. However, we make no warranty of
merchandise or any other warranty, express or implied, with respect to
information currently available to us. Investigations should be made by users
should make their own investigations to determine the suitability of the
information for their particular purposes. In no way shall the company 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 the company has been advised of
the possibility of such damages.

Evaporation Rate:
None available.
Viscosity:
410 deg F
Freezing/Melting Point:
338 deg F
Decomposition Temperature:
210 C
Solubility in water:
119g at 0 C
Specific Gravity/Density:
1.423 @ 25°C
Molecular Weight:
80.0396

**** SECTION 10 - STABILITY AND REACTIVITY ****
Chemical Stability:
Stable. However, may decompose if heated.
Conditions to Avoid:
Excess heat, combustible materials, organic materials, reducing
agents, strong acids, powdered metals.
Incompatible with:
Incompatible with acetic acid, aluminum, ammonium chloride, antimony
bismuth, cadmium, carbon, chlorides, chromium cobalt, containat,
copper, lead, magnesium, magnesium, copper sulfate (anhydrous)
potassium chlorate and water, powdered metals, nickel, organic
matter, phosphorus, potassium and ammonium sulfate, sodium, sodium
hypochlorite, sodium perchlorate, sodium-potassium alloy and
hazardous decomposition products.
Oxides of nitrogen.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****
RTECS#:
CAS# 6484-52-2: BR9050000
LD50/CAS# 6484-52-2: Oral, rat: LD50 = 2217 mg/kg.
Carcinogenicity:
Ammonium nitrate -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No data available.
Teratogenicity: Available.
Reproductive Effects:
No data available.
Neurotoxicity:
No data available.
Mutagenicity:
No data available.
Other: No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****
**** SECTION 13 - DISPOSAL CONSIDERATIONS ****
Chemical waste generators must determine whether a discarded chemical
is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in
40 CFR Parts 261.3. Additionally, waste generators must consult state
and local hazardous waste regulations to ensure complete and accurate
classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****
US DOT
Shipping Name: AMMONIUM NITRATE
Hazard Class: UN1942
UN Number: UN1942
Packing Group: III
Canadian TDG
Shipping Name: AMMONIUM NITRATE
Hazard Class: 5.1
UN Number: UN1942

**** SECTION 15 - REGULATORY INFORMATION ****
US FEDERAL
TSCA
CAS# 6484-52-2 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Results
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.