Material Safety Data Sheet

Hydran™ Ammonium Nitrate MSDS

Section 1. Chemical product and company identification

Trade name : Hydran™ Ammonium Nitrate MSDS

Manufacturer : Yara North America, Inc
100 North Tampa Street
Suite 3200
P.O. Box 24926
Tampa, FL 33623
USA
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Validation date : **2005-06-06.**

Print date : 2005-06-06.

Responsible name : Bill Easterwood

In case of emergency : Additional Product Information: 813-222-5700
or Chemtrec 24-hours Emergency Resonse: 1-800-424-9300

Section 2. Composition, Information on Ingredients

Name	CAS number	% by weight
ammonium nitrate	6484-52-2	90 - 99

Additional information

Contains:	CAS number
In addition to Ammonium Nitrate:	6484-52-2
Magnesium Nitrate	10377-60-3
Dolomite	16389-88-1
Inert fillers	

Section 3. Hazards identification

Physical state : Solid. (Granular solid. Prills)

Emergency overview : Warning!

OXIDIZER.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Store in a dry, cool and well-ventilated area. Avoid contact with combustible materials.

Potential acute health effects

Eyes : Slightly irritating to the eyes.

Skin : Slightly irritating to the skin.

Inhalation : Slightly irritating to the respiratory system.

Ingestion : No known significant effects or critical hazards.

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Medical conditions aggravated by overexposure : Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

See toxicological Information (section 11)

Section 4. First aid measures

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact : Wash with soap and water. Get medical attention if irritation develops.

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Section 5. Fire fighting measures

Flammability of the product : Non-flammable.

Products of combustion : These products are nitrogen oxides (NO, NO_2...). Some metallic oxides.

Fire fighting media and instructions : Use water only in flooding quantities. Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand. Do not release runoff from fire to sewers or waterways. Open doors and windows to give maximum ventilation.

Special protective equipment for fire-fighters : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode.

Remarks : The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides and ammonia. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Do not touch or walk through spilled material.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, carefully scoop up spilled materials and use a non-sparking or explosion proof means to transfer material to an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and storage

Handling : Avoid creating dust when handling and avoid all possible sources of ignition (spark or flame). Avoid contamination by any source including metals, dust, and organic materials. Prevent moisture pick-up in handling and storage.

Storage : Store and use away from heat, sparks, open flame, or any other ignition source. Avoid contact with combustible materials.

Section 8. Exposure Controls, Personal Protection

Engineering controls : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Recommended: safety glasses with side shields

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Respiratory : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: If ventilation is inadequate, use respirator that will protect against dust/mist.

Hands : Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
>8 hour(s) (breakthrough time): butyl rubber , neoprene .

Personal protective equipment (Pictograms) :

Personal protection in case of a large spill : Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product name	Exposure limits
ammonium nitrate	**ACGIH TLV (United States, 2000).** TWA: 10 mg/m^3 15 minute(s).

Section 9. Physical and chemical properties

Physical state : Solid. (Granular solid. Prills)

Color : Grayish white. White to yellowish.

Odor : Odorless.

Boiling/condensation point : Decomposition temperature: >170°C (338°F)

Melting/freezing point : 160 to 170°C (320 to 338°F)

Specific gravity : 1.73 (Water = 1)

Bulk Density (lbs/cu.ft) : 61.2 (loose) - 64.9 (tapped)

Solubility : Easily soluble in cold water.

Solubility (at 20°C/68°F] : 1870g/l

Section 10. Stability and reactivity

Stability and reactivity : Stable under recommended storage and handling conditions (see section 7).

Incompatibility with various substances : Contamination by substances such as carbonaceous materials; chromates; zinc, copper and their alloys; chlorates, chlorides, alkalies and reducing agents decrease the resistance to detonation. The resistance to detonation is decreased by a number of factors such as the presence of contaminants and/or high temperature. Heating under strong confinement (e.g. in tubes or drains) may lead to a violent reaction or explosion.

Section 11. Toxicological information

Ingredient name	Test	Result	Route	Species
Preparation	LD50	>2000 mg/kg	Oral	Rat
ammonium nitrate	LD50	2217 mg/kg	Oral	Rat

Other toxic effects on humans : Slightly hazardous in case of skin contact (irritant), of eye contact (corrosive).

Section 12. Ecological information

Ingredient name	Species	Period	Result
Preparation	Fish (LC50)	96 hour(s)	>100 mg/l

Special remarks on the products of biodegradation : The product does not show any bioaccumulation phenomena.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN2067	AMMONIUM NITRATE BASED FERTILIZER	5.1	III		-
TDG Classification	UN2067	AMMONIUM NITRATE BASED FERTILIZER	5.1	III		-

Section 15. Regulatory information

HCS Classification : Oxidizing material

U.S. Federal regulations : TSCA 8(b) inventory: magnesium nitrate; ammonium nitrate

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: magnesium nitrate; ammonium nitrate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: magnesium nitrate: Fire hazard; ammonium nitrate: Fire hazard, reactive

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	ammonium nitrate	6484-52-2	90 - 99
Supplier notification :	ammonium nitrate	6484-52-2	90 - 99

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

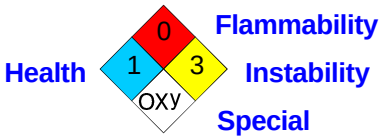
State regulations : Pennsylvania RTK: magnesium nitrate: (generic environmental hazard); ammonium nitrate: (environmental hazard, generic environmental hazard)
Massachusetts RTK: magnesium nitrate; ammonium nitrate
New Jersey: magnesium nitrate; ammonium nitrate

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Fire hazard	0
Reactivity	3

National Fire Protection Association (U.S.A.) :



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Indicates information that has changed from previously issued version.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.