

Accurate Energetic Systems, LLC

MATERIAL SAFETY DATA SHEET

NITROGUANIDINE

MSDS NO. 1001.035

HAZARD RATING: **Health - 2** **Flammability - 3** **Reactivity - 4** **Special - High Explosive**

SECTION I - MANUFACTURE'S INFORMATION

Manufacture/Distributor Name: Accurate Energetic Systems, LLC
Address: 5891 Highway 230 West, McEwen, TN 37101
Telephone Number: (931) 729-4207
Emergency Telephone Number: 1-800-255-3924
Date Prepared: 04/19/02 **Supercedes:**

SECTION II - CHEMICAL COMPOSITION

Component	CAS #	%	OSHA PEL	ACGIH TLV	Other Limits
Nitroguanidine	556-88-7	99% - 100%	n/a	*10 mg/m ³ (total dust) *5 mg/m ³ (resp. dust)	n/a

* - nuisance dust TWA

NOTE: Hazard Class 1, Division 1; SCG "D"

NOTE: Materials in this product are subject to the reporting requirements of SARA, Title III, Section 313 as follows:
None

SECTION III - PHYSICAL AND CHEMICAL DATA

Boiling Point: n/a
Specific Gravity: 1.72
Melting Point: 232⁰-246⁰C
Vapor Pressure (mm Hg): n/a
Vapor Density (Air = 1): n/a
Evaporation Rate (Butyl Acetate = 1): n/a
Solubility In Water: 0.44% at 25⁰C
Appearance And Odor: White needle-like crystalline solid with no distinguishing odor

SECTION IV - FIRE AND EXPLOSION HAZARDS

Flash Point: n/a

Flammable Limits: LEL n/a UEL n/a

Extinguishing Media: water deluge

Special Fire Fighting Procedures:

Do not attempt to fight fires involving high explosives. Isolate area and immediately evacuate all personnel from the area to a safe distance using as much protective cover as possible.

Unusual Fire And Explosion Hazards:

HIGH EXPLOSIVE!! Burning of large quantities of high explosives may transition from deflagration to detonation with extremely violent results.

SECTION V - REACTIVITY/COMPATIBILITY DATA

Stability:

Stable under normal conditions. Avoid subjecting to heat, sparks, impact, friction, and electrostatic discharge.

Incompatibility (materials to avoid):

Avoid oxidizers, strong acids or strong alkalis, initiating explosives, and physical sensitizers such as glass, sand, and metal fragments.

Hazardous Decomposition Products:

During decomposition, emits cyanamide, ammonia, cyanic acid, and cyanuric acid. During combustion, carbon dioxide, carbon monoxide, toxic oxides of nitrogen, and under certain conditions, possibly hydrogen cyanide.

Hazardous Polymerization:

Will not occur

SECTION VI - HEALTH HAZARD DATA

Routes Of Entry:

Eye? Unlikely
Inhalation? Yes (dusting)
Skin? Yes (avoid skin contact)
Ingestion? Yes (improper personal hygiene practices)

Effects Of Over-Exposure:

Acute - Not fully known
Chronic - Not fully known

Signs And Symptoms Of Exposure:

May cause eye and skin irritation, respiratory tract irritation, and gastrointestinal irritation with nausea, vomiting and diarrhea.

Medical Conditions Generally Aggravated By Exposure:

Personnel should be in generally good health

Emergency First Aid Procedures:

Eye - Flush with water for 15 minutes. Remove contact lenses prior to flushing, if applicable. Get medical attention.
Inhalation - Remove to fresh air. Give oxygen if necessary. Get medical attention.
Skin - Wash with soap and warm water. Get medical attention for rash or irritation.
Ingestion - Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cups of milk or water. Contact a physician or Poison Control Center immediately.
Other - n/a

Carcinogenicity:

NTP? Not listed
IARC Monographs? Not listed
OSHA Regulated? Not listed

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Follow If Material Is Spilled Or Released:

Remove all sources of ignition. Avoid any and all situations which could initiate the material, such as friction, impact, heat, sparks, or electrostatic discharge. Moisten material with water. Immediately sweep up spill with a soft bristle brush and a non-sparking pan or shovel. Place material in a properly labeled storage container and store in an approved storage magazine for further disposition.

Waste Disposal Method:

Dispose of in accordance with applicable local, state, and federal regulations.

Precautions To Be Taken In Handling And Storage:

Handle with care. Store only in authorized High Explosives magazine with compatible material and away from all sources of ignition and flammable materials. Do not store with Initiating (Primary) explosives.

Other Precautions:

Material should remain in original shipping container or equivalent for storage purposes.

SECTION VIII - PERSONAL PROTECTION INFORMATION

Respirator Protection (Specify Type):

Dust mask is recommended when handling dry material.

Ventilation:

Local Exhaust -	Hoods for dusty operations are recommended.
Mechanical (General) -	General ventilation necessary.
Special -	Dust collection system required if hoods are utilized.
Other -	n/a

Protective Gloves:

For prolonged or repeated skin contact, impervious gloves are recommended.

Eye Protection:

Safety glasses or goggles that meet or exceed ANSI Z87.1 (latest revision)

Other Protective Clothing Or Equipment:

Cotton clothing (including undergarments); cotton coveralls or lab coat; conductive-soled footwear

Work/Hygienic Practices:

Wash hands thoroughly after handling; daily clothing change; daily shower; no eating or drinking in exposed locations

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken:

CAUTION: High explosives are extremely dangerous. Only highly trained and qualified personnel should utilize this material. Explosives must be tested for compatibility with any materials which they contact. Clean up any spills of material immediately. Proper housekeeping techniques must be maintained to minimize the accumulation of explosive dust. Follow all safety regulations and precautions when handling, storing, or processing explosive material.

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