

1. PRODUCT AND COMPANY IDENTIFICATION

Name: **Double-base smokeless powder, propellant.**

Trade Names and Synonyms: **Accurate::No. 2, No. 5, No. 7, No. 9, 4100, 1680, 2200, 2230, 2460, 2520, 2700, MAGPRO, 8700, Nitro 100, 5744**

Distributed By: **WESTERN POWDERS, INC.**
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Miles City, Montana 59301
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Transportation Emergencies – Chemtrec – 1-800-424-9300

2. HAZARD IDENTIFICATION

Emergency Overview – Danger! Extremely Flammable – Explosive.

Accidental Fire or Explosion is Likely to Cause Severe Injury or Death.

Avoid Exposure to all Sources of Heat or Flame, Electrical Sparks, Static Electricity, and Impact Shock.

OSHA Regulatory Status - This product may be considered to be a hazardous chemical under OSHA Hazard Communication Standard 29 CFR 1910.1200.

Applicable OSHA Classifications: Explosive, Toxic, Blood Toxin, Skin and Eye Irritant

Potential Health Effects – Eye contact may cause irritation. Acute contact may cause skin irritation. Acute exposure may cause irritation to nose, mouth, throat and lungs. Ingestion may cause irritation to gastrointestinal tract. Nitroglycerin content may cause dilation of blood vessels with a drop in blood pressure and headache, cyanosis and mental confusion. Nausea, vomiting and abdominal pain may also occur. Some components of this granular mixture may be absorbed directly through the skin. Neither this product nor any of its ingredients (except Dinitrotoluene) are listed as carcinogens by OSHA, NIOSH-NTP and IARC. Per IARC 28 Dinitrotoluene is listed as possibly carcinogenic to humans.

Potential Environmental Effects: Ecological studies on this product unknown. Some components are known to be harmful to aquatic organisms

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS #	wt. %
Nitrocellulose	9004-70-0	<90
Nitroglycerin	55-63-0	7 - 23
Dinitrotoluene	121-14-2	0 - 2
Dibutyl phthalate	84-74-2	0 - 7
Diphenylamine	122-39-4	0.5 – 3.0
Potassium nitrate	7757-79-1	0 – 1.5
Sodium sulfate	7757-82-6	0 – 1
Graphite	7782-42-5	1 max.
Polyester adipate	Not disclosed	0 - 10
Ethyl Centralite	85-98-3	0 - 6
Potassium sulfate	7778-80-5	0 - 1
Calcium carbonate	471-34-1	0 - 1
Deterrent	Not given	0 - 7
Rosin	8050-09-7	0 - 5

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:

Clean up spills immediately using soft bristle brush and conductive rubber or plastic shovel. Use caution, material is sensitive to initiation from sources such as heat, flame, impact, friction or sparks.

AIR RELEASE: Not applicable

WATER RELEASE:

- This material is heavier than water. Create an overflow dam with filtration capabilities to retain material.
- Divert water flow or stop if possible. Gather wet material using non-sparking or plastic utensils.
- Keep material damp until ready for disposal.

LAND SPILL:

- Clean up of spill materials may be accomplished using non-sparking or plastic utensils. Wear non-flammable or flame retardant clothing at all times. Wet all spill materials prior to initiating clean up procedure.
- Material may best be destroyed by controlled open burning in small quantities (maximum about 1 pound) in piles not over 1 inch deep. Use an ignition train of slow-burning, combustible materials to permit retreat to a safe distance before powder is ignited. Stay upwind, do not breathe products of combustion. Burn only with permission of all appropriate regulatory agencies.

WASTE DISPOSAL:

- If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D003
- If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly.
- If this material becomes a waste, it can be disposed by controlled open burning in small quantities, as described above, with proper local agency authorization.

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

7. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:

- For handling and storage requirements see 29 CFR 1920.109. Also see <<Properties and Storage of Smokeless Powder>> published by the SPORTING ARMS AND AMMUNITION MANUFACTURES' INSTITUTE; INC. (SAAMI), PO Box 838, Brandford, CT 06405.
- This product may react with acids, oxidizing agents, alkalizes or amines (organic and inorganic) and should not be stored near such materials.
- Avoid exposure to sunlight or artificial ultraviolet light.
- Recommended storage conditions -: 21°C (70°F) 50% relative humidity.
- Keep away from heat, sparks and open flame.
- Store in a cool, dry place.
- Do not store smokeless powder in the same area with solvents, flammable gases or highly combustible materials.
- Must be stored in original DOT approved containers or shipping container.
- Do not smoke in areas where powder is stored or used. (50 ft. minimum distance required).

Section 7 - Continued

- Do not keep old or salvaged powders. Check old powders for deterioration regularly. Destroy deteriorated powders immediately.
- Empty containers may contain residues of powder, and should be treated as hazardous waste.

ENGINEERING CONTROLS:

Adequate ventilation should be provided to keep dust concentrations below acceptable exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE:

Eliminate ignition sources and prevent build-up of static electric charges. Thoroughly clean up all powder grains and dust residues in the maintenance and repair areas before starting work.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ESTABLISHED EXPOSURE LIMITS

COMPONENT	OSHA (PEL)	ACGIH (TLV)
Nitrocellulose	None established	None established
Nitroglycerin	2mg/m ³ ceiling (skin)	0.05ppm TWA (skin)
Dinitrotoluene	1.5 mg/m ³ , skin	1.5 mg/m ³ , skin
Dibutyl phthalate	5 mg/m ³ TWA	5 mg/m ³ TWA
Diphenylamine	Not established	10 mg/m ³ TWA
Potassium nitrate	None established	
Sodium sulfate	None established	
Graphite	15 mg/m ³ total dust 5 mg/m ³ respirable dust	2 mg/m ³ Respirable dust
Polyester adipate	None established	
Ethyl Centralite	None established	
Potassium sulfate	None established	None established
Calcium carbonate	15 mg/m ³ total dust 5 mg/m ³ respirable dust	10 mg/m ³
Deterrent	Not disclosed	
Rosin	None established	

PERSONAL PROTECTIVE EQUIPMENT

- Safety glasses or goggles with side shields.
- Impervious gloves.
- Appropriate respiratory protection required when exposure to airborne containment is likely to exceed acceptable limits. Respirators should be selected and used in accordance with OSHA Subpart I (29 CFR 1910.134) and manufacturer's recommendations.
- Flame-retardant cotton coveralls and conductive safety shoes.

ENGINEERING CONTROLS

Adequate ventilation should be provided to keep dust concentrations below acceptable exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations. Use a local mechanical ventilation system if needed, preferably with explosion proof construction, and with a suitable dust filter installed at inlet to suction piping to the system to prevent accumulation of explosive dust in ventilation piping and blower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Granular Solid Mixture, silvery gray to black
Freezing Point	Not Applicable
Boiling Point	Not Applicable
Decomposition Temperature	Decomposition becomes measurable above 50° C (122°F)
Autoignition Temperature	160°C – 180°C (320° F - 360°F)
Specific Gravity	1.2 – 1.6
Bulk Density	0.5 – 1.1 (g/cc)
pH 25 Deg. C	Not Applicable
Solubility in Water	Negligible
Volatiles, Percent By Volume	<2
Vapor Pressure 25 Deg. C	<1mm Hg
Evaporation Rate	Negligible
Vapor Density	Not Applicable
Molecular Weight	Not Applicable - mixture
Odor	None
Coefficient of Oil/Water Distribution	No Data

10. STABILITY AND REACTIVITY

INSTABILITY: Unstable with heat, unstable with static charges, and unstable with impact. Not usual hazards when stored and used properly.

INCOMPATIBILITY: Incompatible with acids, bases, oxidants, amines.

DECOMPOSITION: Hazardous gases produced are carbon monoxide, carbon dioxide, oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

FIRE AND EXPLOSION DATA: Ignition temperature: 160° - 180° C (320° - 360° F)
Decomposition begins at approximately 50°C (122°F)

OTHER CONDITIONS TO AVOID Direct sunlight.

11. TOXICOLOGICAL INFORMATION

ROUTES OF ABSORPTION: Inhalation Skin Ingestion Eye Contact

TOXICITY DATA:

Nitrocellulose: Rat, Oral LD₅₀ : >5000 mg/kg

Dinitrotoluene Rat, Inhalation, LC₅₀ : 2.87 mg/l, 1 hour
Rat, Oral LD₅₀ : 177mg/kg

Dibutyl Phthalate: Human, Oral TD_{LO} : 140 mg/kg
Rat, Oral LD₅₀ : 7499 mg/kg

Nitroglycerin: Woman, Oral TD_{LO} : 8 µg/kg
Rat, Acute Oral LD₅₀ : 105 mg/kg

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY - Components of this product known to be toxic to aquatic organisms:
diphenylamine, dibutyl phthalate, dinitrotoluene, nitroglycerine

Nitrocellulose: Acute aquatic 96- hour static LC50 value falls within the relatively harmless range of >1,000 mg/L, according to U.S. Wildlife criteria. Four species were tested. EC50 in four species of bacteria ranged from 731 mg/L to > 1,000 mg/L.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

- If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D003
- If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly.
- Material may best be safely destroyed by controlled open burning in small quantities (maximum about 1 pound) in piles not over 1 inch deep. Use an ignition train of slow-burning, combustible materials to permit retreat to a safe distance before powder is ignited. Stay upwind, do not breathe products of combustion. Burn only with permission of all local regulatory authorities.

14. TRANSPORT INFORMATION

This material is regulated as a DOT Hazardous Material
US DOT Classification: Land – Powder, Smokeless, 1.3C, UN 0161, - for all non-bulk powders listed in this MSDS shipped in excess of 100 pounds
Land - Smokeless Powder for Small Arms (100 pounds or less), NA 3178, 4.1
– for all products listed in this MSDS, in DOT approved containers and packaging.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) : all components of this product are listed in the TSCA Inventory.

SARA Title III, Sections 311/312 : Hazard Categories per 40 CFR 370.21 :

Acute (health) - Yes
Chronic (health) – No
Reactive (physical) - Yes
Sudden Release (physical) – Yes

CERCLA Sections 102a/103 – Hazardous Substances – RQ: dinitrotoluene, (4.54 kg), Nitroglycerin (4.54 kg), Dibutyl phthalate (4.54 kg),

SARA Title III, Section 313 covered components: diphenylamine, dinitrotoluene, dibutyl phthalate, Nitroglycerin

16. OTHER INFORMATION

Revised: 11/15/2007 by Western Powders, Inc.

CAUTION: Propellants are extremely dangerous. Only highly trained and qualified personnel should utilize this material. Propellants should 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 propellant dust. Follow all safety regulations and precautions when handling, storing, or processing propellant material.

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