

1. PRODUCT AND COMPANY IDENTIFICATION

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

Trade Names and Synonyms: **Accurate:: Solo 1000, Solo 1250, 2015, 2495, 4064, 4350, 3100**

Distributed By: **WESTERN POWDERS, INC.**

P.O. Box 158
Miles City, Montana 59301
Telephone: (406)234-0422
Toll Free: (800)497-1007

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 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, ,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. 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 | <98 |
| Dinitrotoluene | 121-14-2 | 0 - 16 |
| Diphenylamine | 122-39-4 | 0.5 – 3.0 |
| Potassium nitrate | 7757-79-1 | 0 – 1.5 |
| Potassium sulfate | 7778-80-5 | 0 – 1 |
| Graphite | 7782-42-5 | 1.5 max. |
| Ethyl Centralite | 85-98-3 | 0 - 6 |
| Methyl Centralite | 611-92-7 | 0 – 2 |

4. FIRST AID MEASURES

EYES: Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician.

Section 6 - Continued

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.

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| 7. HANDLING AND STORAGE |
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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).
- Do not keep old or salvaged powders. Check old powders for deterioration regularly. Destroy deteriorated powders immediately.

Section 7 – continued.

- 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 |
| Diphenylamine | Not established | 10 mg/m ³ TWA |
| Potassium nitrate | None established | |
| Ethyl Centralite | None established | |
| Methyl Centralite | None established | |
| Graphite | 15 mg/m ³ total dust 5 mg/m ³ respirable dust | 2 mg/m ³ Respirable dust |
| Potassium sulfate | None established | None established |
| Dinitrotoluene | 1.5 mg/m ³ , skin | 1.5 mg/m ³ , skin |

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

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|--|--|
| 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

12. ECOLOGICAL INFORMATION

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

Section 12 - Continued

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 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)

SARA Title III, Section 313 covered components: diphenylamine, dinitrotoluene

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.

The information contained herein is believed to be accurate and represents the best information currently available to Western Powders, Inc. . No warranty or guarantee, express or implied, with regard to the safety or suitability of these products, or the results obtained from their use, is offered by Western Powders, Inc.. Buyer and user assume any and all risk, responsibility and liability for any injury (including death), loss or damage arising from usage of these products.