

Material Safety Data Sheet

MODEL 4431 40mm CS Powder Barricade Projectile

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910. 1200. Standard must be consulted for specific requirements

QUICK IDENTIFIER

Common Name: (used on label and list)

SECTION 1

| | | | |
|--|---------------------------------|-------------------------|--------------|
| Manufacturer's Name | Combined Tactical Systems, Inc. | | |
| Address | 388 Kinsman Road | Emergency Telephone No. | 800-424-9300 |
| City, State and ZIP | Jamestown, PA 16134 | Other Information Calls | 724-932-2177 |
| Signature of Person Responsible for Preparation (Optional) | Date Prepared | | 05/17/04 |

SECTION 2 - HAZARDOUS INGREDIENTS / IDENTITY

| Hazardous Component(s) (chemical & common name(s)) | OSHA PEL | ACGIH TLV | Other Exposure Limits | % (Optional) | CAS No. |
|--|----------------------|----------------------|----------------------------------|-----------------|------------|
| Center Fire Primer | | | | | |
| Lead Styphnate | .05mg/m ³ | .15mg/m ³ | | | 15245-44-0 |
| Barium Nitrate | .5mg/m ³ | .5mg/m ³ | | | 10022-31-8 |
| Antimony Sulfide | .5mg/m ³ | .5mg/m ³ | | | 1345-04-6 |
| RED DOT® smokeless powder | | | | | |
| Nitroglycerin | | .46mg/m ³ | .1mg/m ³ OSHA STEL | .51gm | 55-63-0 |
| Diphenylamine | | 10mg/m ³ | | | 122-39-4 |
| Dispersion Mixture | | | | | |
| Magnesium Oxide | 5mg/m ³ | 5mg/m ³ | | | 1309-48-4 |
| Silane, dimethldichloro o-Chlorobenzalmalononitrile | 20mppcf | 10mg/m ³ | | | 68611-44-9 |

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

| | | | | | |
|--------------------------|--|--|-------------------------|---------------------------|----|
| Boiling Point | NA | Specific Gravity H ₂ O=1 | NA | Vapor Pressure (mm Hg) | NA |
| Vapor Density (Air=1) | NA | Solubility in Water | Not soluble in water | Reactivity in Water | NA |
| Appearance & Odor | 40mm cartridge black in color, no odor | | | Melting Point | NA |

SECTION 4 - FIRE & EXPLOSION DATA

| | | | | | | | | |
|----------------------------------|----|---|--|--|--------------|----|--------------|----|
| Flash Point | NA | Method Used | NA | Flammable Limits in Air % by Volume | LEL Lower | NA | UEL Upper | NA |
| Auto-Ignition Temperature | NA | Extinguisher Media | Water spray, Apply by mechanical means only. | | | | | |
| Special Fire Fighting Procedures | | Fight all fires from a remote and explosion resistant site. Evacuate all non-essential personnel. | | | | | | |
| Unusual Fire & Explosion Hazards | | Use water to cool containers exposed to fire. Net Explosive Weight (NEW) .51gm (approx) | | | | | | |

SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)

| | | | | |
|--------------------------------------|--|-------------------------------------|---------------------|----------------------------------|
| Stability | Unstable | <input type="checkbox"/> | Conditions to Avoid | Heat, flames, mechanical impact, |
| | Stable | <input checked="" type="checkbox"/> | | |
| Incompatibility (Materials to Avoid) | Acids, caustics and strong oxidizing agents | | | |
| Hazardous Decomposition Products | Burning may produce Nitrogen oxide carbon monoxide | | | |
| Hazardous Polymerization | May Occur | <input type="checkbox"/> | Conditions to Avoid | N/A |
| | Will Not Occur | <input checked="" type="checkbox"/> | | |

SECTION 6 - HEALTH HAZARDS

| | | | | | | | | | | | |
|---|---------------|---|--|---|-------------------------------------|----------------------------|-----|-------------------------------------|------|-----|-------------------------------------|
| 1. Acute | | None under normal handling | | 2. Chronic | | None under normal handling | | | | | |
| Signs and Symptoms of Exposure | | | | Tearing of eyes, irritation of respiratory tract and mucous membranes | | | | | | | |
| Medical Conditions Generally Aggravated by Exposure | | | | Respiratory tract – Asthma | | | | | | | |
| | | | | | | | | | | | |
| Listed as Carcinogen or Potential Carcinogen | | National Toxicology Program | | Yes | <input type="checkbox"/> | I.A.R.C. Monographs | Yes | <input type="checkbox"/> | OSHA | Yes | <input type="checkbox"/> |
| | | | | No | <input checked="" type="checkbox"/> | | No | <input checked="" type="checkbox"/> | | No | <input checked="" type="checkbox"/> |
| Emergency and First Aid Procedures | | If any medical problem arises from the use of this product seek medical attention from qualified medical persons. | | | | | | | | | |
| ROUTES OF ENTRY | 1. Inhalation | Fresh Air, Oxygen if needed | | | | | | | | | |
| | 2. Eyes | Flush with copious amounts of water, fresh air | | | | | | | | | |
| | 3. Skin | Wash with copious amounts of water | | | | | | | | | |
| | 4. Ingestion | Contact Physician | | | | | | | | | |

SECTION 7 - SPECIAL PRECAUTIONS & SPILL / LEAK PROCEDURES

| | |
|--|--|
| Precautions in Handling and Storage | Keep away from heat, flames or strong oxidizers |
| Other precautions | Handle as DOD, UN and DOT explosive device per Federal, State and Local laws. |
| Steps to be Taken in Case Material is released or Spilled | Undamaged units may be picked up and returned to shipping container. Wear suitable protective clothing |
| Waste Disposal Method (Consult Federal, State and local Regulations) | By persons qualified to dispose of explosives at an approved site under approved procedures. |

SECTION 8 - SPECIAL PROTECTION INFORMATION / CONTROL MEASURES

| Respiratory Protection (Specify Type) | | Full face respirator with organic cartridge, or Self Contained Breathing Apparatus (SCBA) | | | | | | | |
|--|-----|--|-----|---|-----|--------------------------------------|----|-------|----|
| Ventilation | Yes | Local Exhaust | Yes | Mechanical (General) | Yes | Special | No | Other | No |
| Protective Gloves | Yes | Eye Protection | Yes | Other Protective Clothing or Equipment | | As necessary to prevent skin contact | | | |
| Work / Hygienic Practices | | Wash thoroughly after handling | | | | | | | |

IMPORTANT - Do not leave any blank spaces. If required information is unavailable, unknown or does not apply, so indicate.