

Material Safety Data Sheet

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

MODEL 8230 Tactical CS Smoke Grenade

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 | | 12/29/98 |

SECTION 2 - HAZARDOUS INGREDIENTS / IDENTITY

| Hazardous Component(s) (chemical & common name(s)) | OSHA PEL | ACGIH TLV | Other Exposure Limits | % (Optional) | CAS No. |
|---|---------------------|----------------------|--------------------------|-----------------|------------|
| Starter Mixture | | | | 5gm | |
| Potassium Nitrate | | | | | 7557-79-1 |
| Silicon | | 10mg/m ³ | | | 7440-21-3 |
| Charcoal | | 15Mppcf | | | |
| CS Smoke | | | | 88gm | |
| Fuel Mixture | | | | 71% | |
| Potassium Chlorate | | | | | 3811-04-9 |
| Sucrose | 15mg/m ³ | 10mg/m ³ | | | 57-50-1 |
| Magnesium Carbonate | 15mg/m ³ | 10mg/m ³ | | | 546-93-0 |
| Nitrocellulose | | | | | 9004-70-0 |
| CS | | | | 29% | |
| o-Chlorobenzalmalononitrile | | 0.4mg/m ³ | | | 26998-41-1 |

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 | White crystal, Pungent 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 | CO ² , Dry Chemical, water | | | | | |
| Special Fire Fighting Procedures | | Do Not Fight Fire, If ignition occurs evacuate downwind area, allow unit to burn out | | | | | | |
| Unusual Fire & Explosion Hazards | | | | | | | | |

SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)

| | | | |
|--------------------------------------|---|-------------------------------------|---------------------|
| Stability | Unstable | <input type="checkbox"/> | Conditions to Avoid |
| | Stable | <input checked="" type="checkbox"/> | |
| Incompatibility (Materials to Avoid) | Strong oxidizing agents | | |
| Hazardous Decomposition Products | Burning may produce carbon monoxide and/or carbon dioxide | | |
| Hazardous Polymerization | May Occur | <input type="checkbox"/> | Conditions to Avoid |
| | 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"/> No <input checked="" type="checkbox"/> | I.A.R.C. Monographs | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | OSHA Yes <input 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 | |
| Steps to be Taken in Case Material is released or Spilled | Wear suitable protective clothing, Undamaged units may be picked up and returned to shipping container |
| Waste Disposal Method (Consult Federal, State and local Regulations) | |

SECTION 8 - SPECIAL PROTECTION INFORMATION / CONTROL MEASURES

| | | | | | | | | | |
|---------------------------------------|--|----------------|-----|--|--------------------------------------|---------|----|-------|----|
| Respiratory Protection (Specify Type) | Full face respirator with organic filter 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.