

# Material Safety Data Sheet

MODEL 3225 37/40mm CTG.  
CN Smoke 5-Projectiles

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                   |                         | 12/29/98     |

## SECTION 2 - HAZARDOUS INGREDIENTS / IDENTITY

| Hazardous Component(s)<br>(chemical & common name(s)) | OSHA<br>PEL         | ACGIH<br>TLV        | Other Exposure<br>Limits | %<br>(Optional) | CAS No.   |
|---|---------------------|---------------------|--------------------------|-----------------|-----------|
| Primer, Shot Shell, W209                              |                     |                     |                          |                 |           |
| Propellant, Black Powder                              |                     |                     |                          | 2gm             |           |
| <b>Starter Mixture</b>                                |                     |                     |                          | 5gm             |           |
| Potassium Nitrate                                     |                     |                     |                          |                 | 7557-79-1 |
| Silicon   |                     | 10mg/m <sup>3</sup> |                          |                 | 7440-21-3 |
| Charcoal  |                     | 15Mppcf             |                          |                 |           |
| <b>CN Smoke</b>                                       |                     |                     |                          | 92gm            |           |
| Fuel Mixture  |                     |                     |                          | 71%             |           |
| Potassium Chlorate                                    |                     | 5mg/m <sup>3</sup>  |                          |                 | 3811-04-9 |
| Sucrose   | 15mg/m <sup>3</sup> | 10mg/m <sup>3</sup> |                          |                 | 57-50-1   |
| Magnesium Carbonate                                   | 15mg/m <sup>3</sup> | 10mg/m <sup>3</sup> |                          |                 | 546-93-0  |
| Nitrocellulose  |                     |                     |                          |                 | 9004-70-0 |
| CN  |                     |                     |                          | 29%             |           |
| Chloroacetophenone                                    | .05ppm              | .05ppm              |                          |                 | 532-27-4  |

## SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

|                          |                             |  |                         |                           |    |
|--------------------------|-----------------------------|--|-------------------------|---------------------------|----|
| Boiling Point            | NA                          | Specific Gravity<br>H <sub>2</sub> O=1 | NA                      | Vapor Pressure<br>(mm Hg) | NA |
| Vapor Density<br>(Air=1) | NA                          | Solubility in<br>Water                 | Not soluble in<br>water | Reactivity in<br>Water    | NA |
| Appearance &<br>Odor     | White Crystal, Pungent Odor |  |                         | Melting Point             | NA |

## SECTION 4 - FIRE & EXPLOSION DATA

|                                  |    |   |                                       |  |              |    |              |    |
|----------------------------------|----|---|---------------------------------------|--|--------------|----|--------------|----|
| Flash Point                      | NA | Method<br>Used  | NA                                    | Flammable Limits<br>in Air % by Volume | LEL<br>Lower | NA | UEL<br>Upper | NA |
| Auto-Ignition<br>Temperature     | NA | Extinguisher<br>Media   | CO <sup>2</sup> , Dry Chemical, water |  |              |    |              |    |
| Special Fire Fighting Procedures |    | Do Not Fight Fire, If ignition occurs evacuate downwind area and allow unit to burn out |                                       |  |              |    |              |    |
| Unusual Fire & Explosion Hazards |    | Net Explosive Weight (NEW) 2gm  |                                       |  |              |    |              |    |

**SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)**

|                                      |   |                                     |                     |               |
|--------------------------------------|---|-------------------------------------|---------------------|---------------|
| Stability                            | Unstable  | <input type="checkbox"/>            | Conditions to Avoid | Heat, flames, |
|                                      | 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                        | 2. Chronic  | None   |   |
| 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"/><br>No <input checked="" type="checkbox"/>  | I.A.R.C. Monographs Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/> | OSHA Yes <input type="checkbox"/><br>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            | Wear suitable protective clothing, Undamaged units may be returned to shipping container    |
| 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<br>(Specify Type) |     | Full face respirator with organic cartridge, or Self contained breathing apparatus<br>(SCBA) |     |   |     |                                      |    |       |    |
|--|-----|--|-----|---|-----|--------------------------------------|----|-------|----|
| Ventilation                              | Yes | Local Exhaust  | Yes | Mechanical<br>(General)                   | Yes | Special                              | NO | Other | NO |
| Protective<br>Gloves                     | Yes | Eye Protection   | Yes | Other Protective Clothing<br>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.