

# 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 3235 37/40mm CTG. CS Smoke 5-Projectiles

### 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>CS 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 |
| CS  |                     |                      |                          | 29%             |           |
| o-Chlorobenzalmalononitrile                           |                     | 0.4mg/m <sup>3</sup> |                          |                 | 2698-41-1 |

### 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 Used   | NA                                    | Flammable Limits in Air % by Volume | LEL Lower | NA | UEL Upper | NA |
| Auto-Ignition Temperature        | NA | Extinguisher 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 |    |   |                                       |                                     |           |    |           |    |

**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                        | 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. |                     |  |      |  |
| <b>ROUTES OF ENTRY</b>                              | 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 (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.