INCH–POUND
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SUPERSEDING
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COMMERCIAL ITEM DESCRIPTION

DISPERSER AND RIOT CONTROL AGENT, MANUALLY CARRIED

The General Services Administration has authorized the use of this commercial item description as a replacement for military specification MIL-D-51413 which is inactive for new design.

1. SCOPE AND CLASSIFICATION.

This specification covers performance requirements and verification methods for three types of riot control dispersers:

Type I – Disperser, Riot Control Agent, Tear Gas: CS, M38

Type II – Disperser, Riot Control Agent, Pepper: OC, M39

Type III– Disperser, Riot Control Agent, Simulant: Trainer, M40

The Type I and II dispersers are intended to incapacitate an individual within 10 feet by stopping, diverting or altering that person's activity without causing death. The Type III disperser is intended to perform the same as the Type I & II dispersers except not incapacitate the individual sprayed.

2. SALIENT CHARACTERISTICS.

2.1 Operating requirements.

2.1.1 Dispersement number and duration. The disperser shall dispense at least 15 separate, visible bursts, each initiated by the user. Upon momentary depression of the disperser's actuator, the duration of each burst shall be within 0.75 ± 0.25 seconds.

2.1.2 Effective range. The disperser shall spray or dispense visible riot control agent (riot control simulant for type III) for a distance of at least 10 feet. The effective range (for incapacitation) shall be 3 to 10 feet.

Comments, suggestions, or questions on this document should be addressed to: U.S. Army Edgewood Chemical Biological Center, ATTN: AMSRD–ECB–ENA–S, 5183 Blackhawk Road, Aberdeen Proving Ground, MD 21010–5424 or emailed to SpecsTeam@apgea.army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at http://assist.daps.dla.mil.

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2.1.3 Dispersion. The degree of dispersion shall be large enough to affect a single person target within the 10 foot effective range. The coverage swath at a distance 10 feet from disperser shall be large enough to engage a 12 inch (facial) target. The coverage swath at a distance of 3 to 10 feet shall not be so small that the safety hazard risk is greater than that of the M36 disperser.

2.1.4 Riot control agents. The disperser shall be able to dispense riot control agent from a single cartridge. The allowed class(es) of disperser shall be specified in the solicitation. The Type I disperser shall dispense Ortho-chlorobenzylidene malononitrile (CS). The Type II disperser shall dispense agent Oleoresin Capsicum (OC). The Type III disperser shall dispense an inert simulant that replicates the operational capabilities of the other two types of dispersers.

2.1.5 Leakage. When filled and pressurized, the disperser shall not leak.

2.1.6 Accident avoidance. The disperser's actuator shall be protected in a manner that prevents accidental dispersements. The disperser shall have a safety lock or protective cap which prevents the actuator from being accidentally depressed. If it has a safety lock, the disperser shall be capable of dispersing agent when the actuator is in the unlocked position and not dispense agent when the actuator is in the locked position. The safety device shall automatically return to the fully safe position upon removal of the operator's finger from the actuator.

2.2 Interface and interoperability requirements.

2.2.1 Interface with carrier. The disperser shall fit into the carrier of the Law Enforcement Ensemble (Bianchi model number 7307S) or a functionally equivalent carrier which can hold a disperser which measures up to 6.30 inches in length, 1.50 inches in width, and 1.76 inches in depth (front to back).

2.2.2 Interface with operator and gear. The disperser shall be fully operable with one hand, whether the user wears chemical biological protective mask and standard work gloves or not. The disperser shall be compatible with Mission Oriented Protective Posture (MOPP4) gloves and masks intended for military operations and also be compatible with gloves and masks worn by law enforcement personnel.

2.2.3 Color. The color of the disperser valve assembly shall be black. The color of the disperser container and markings shall be in accordance with 2.3.5.

2.2.4 Weight. Weight of disperser without carrier shall not exceed 5 ounces.

2.2.5 Size. Dimensions of disperser shall not exceed 6.30 inches in length, 1.50 inches in width, and 1.76 inches in depth (front to back).

2.3 Ownership and support.

2.3.1 Safety, health and environment. See section 3.

2.3.2 Reliability. The reliability (proportion of successfully operating dispersers) shall be at least 0.9 after storage and during each operating environment. A failure is defined as the inability to meet the dispersement number, duration and effective range requirements described in 2.1. Nozzle plugging, valve sticking, and non return of the safety device to the fully safe condition are also considered failures.

2.3.3 Maintainability. Operator Preventive Maintenance Checks and Services (PMCS) shall not exceed 2 minutes. PMCS shall include visual checks and routine cleaning. The maintenance burden shall not justify an additional operator or maintainer.

2.3.4 Shelf life. The shelf life of the disperser shall be at least 2 years. (Shelf life is that period in which the disperser is packaged and in sheltered storage before first time use.)

2.3.5 Identification, marking and color coding. Each disperser shall be color coded in accordance with MIL-STD-709. The colors of each disperser shall be in accordance with FED-STD-595. The Type I and Type II containers shall be predominantly dark gray (#36231, FED-STD-595) with a 5/8 inch circumferential band, and agent symbol and all other markings in dark red (#31136). The Type III container shall be light blue (#35109) with white (#37875) lettering. The marking shall be clearly visible and shall include approved item name, military type designation, NSN, manufacturer's CAGE code and Part Number, contract number, lot number, cautions, decontamination instructions, and expiration date. Markings shall be clear, legible and non-smearing. If actuator has locked and unlocked positions, each position shall be marked and identifiable. An example of an acceptable marking, with the minimum required cautions for Type 1, Type II, and Type III dispersers is shown in section 6.7.

2.3.6 Operating instructions. The disperser shall contain operating instructions with precautionary notes and instructions for disposal or replacing. The instructions shall be written either on the disperser or an attached label or on a separate card included with the disperser. Instructions shall be clear, legible and non-smearing. The operating instructions shall have been validated by hands-on performance to assure the procedures are accurate and understandable by the typical user.

2.4 Environmental requirements.

2.4.1 Hot/cold storage. The disperser shall resist damage (no deformity and markings intact) and not experience loss of riot control agent as a result of hot or cold storage. The disperser shall operate at an ambient temperature of 70 ± 3°F following a minimum 24-hour hot storage at 120 ± 3°F and following a minimum 24-hour cold storage at –30 ± 3°F.

2.4.2 Hot temperature operation. The disperser shall operate at 120 ± 3°F. The disperser shall be capable of meeting operating requirements after being conditioned for at least 4 hours at a temperature of 120 ± 3°F.

2.4.3 Cold temperature operation. The disperser shall operate at 10 ± 3°F. The disperser shall be capable of meeting operating requirements after being conditioned for at least 4 hours at a temperature of 10 ± 3°F.

2.4.4 High humidity resistance. The disperser shall resist the effects of high humidity and operate after being exposed to high humidity in accordance with MIL-STD-810F, Method 507.4 (Humidity) except step 1 is not required.

2.4.5 Shock and vibration. The disperser shall show no physical damage, shall not leak, and shall operate after being subjected to the following:

a. Packaged drop testing in accordance with 49CFR 178.603from a height of 4 feet except each sample shall be dropped in each orientation.

b. Packaged vibration testing in accordance with 49CFR 178.608.
c. Unpackaged loose cargo testing in accordance with MIL-STD-810F, Method 514.5 (Vibration), Procedure II (Loose Cargo), except that the test duration shall be 20 minutes total and the disperser shall be inverted at the midpoint of the test. Twenty percent of the dispersers may exhibit a reduced range between 4 and 10 feet on 20 percent of the bursts.
d. Unpackaged drop testing in accordance with MIL-STD-810F (Shock), Procedure IV (Transit Drop), except only 5 drops per item, base down, top down, side down, 45° top down, and 45° base down. Minor visable damage is acceptable and at least 20% of the dispersers shall be fully functional.

2.4.6 Corrosion resistance. The disperser shall resist salt fog corrosion and operate after salt fog aerosol exposure in accordance with Procedure I of Method 509.4 of MIL-STD-810 or commercial equivalent such as ASTM G85, ANSI Z118.1.

2.4.7 Chemical resistance. The disperser shall resist decay by common petroleum products (motor oil, gasoline) and insect repellent and shall be capable of operating after exposure.

2.4.8 Rain protection. The disperser in proper packaging and its carrier shall resist water intrusion or prevent rain water accumulation inside.

2.4.9 Fungus resistance. The disperser shall resist fungus growth and operate after fungus exposure in accordance with MIL-STD-810F, Method 508.5. The disperser shall have a microbial growth rating no greater than one.

2.4.10 Dust protection. The disperser shall resist dust exposure and operate after being exposed to blowing dust IAW MIL-STD-810F, Method 510.4 (Sand and Dust), Procedure I (Fine Dust), steps 1, 2, 3, and 10. Following step 3, remove excess dust by inverting the dispersers except dust shall not be wiped or blown off. Twenty five percent of the dispersers shall be oriented vertically top up, the remainder horizontally.

3. REGULATORY REQUIREMENTS.

3.1 Safety and occupational health.

3.1.1 Toxicity clearance and health hazard assessment. A toxicity clearance per Army Regulation 40-5, IAW Department of the Army Pamplet 70-3 for each new OC, CS, and simulant formulation, and a Health Hazard Assessment per Army Regulation 40-10 and AR 602-2, for use of the dispersers, must be received from the US Army Center for Health Promotion and Preventative Medicine.
(http://chppm-www.apgea.army.mil/hha/default.htm).

3.1.2 OSHA Standards. The disperser's MSDS sheets and labeling shall be prepared to comply with 29 CFR 1910, Occupational Safety and Health Standards. More specifically, the disperser shall:

a. Not have any temporary or permanent adverse effects on the operator during operation.
b. Not cause permanent injury by inhalation, ingestion, or by contact with the eye or skin for most target subjects.
c. Not have any known carcinogenic, genetic or reproductive effects.
d. Minimize the risk of ignition and flame generation. The flame risk shall not exceed that of the M32 and M36 riot control agent dispersers used in the past.

3.2 Environmental protection.

3.2.1 Hazardous waste. The disperser, upon disposal, expended or expired, shall not be a Resource Recovery Conservation Act hazardous waste per 40 CFR 261, Identification and Listing of Hazardous Wastes.

3.2.2 Ozone depleting chemicals. The disperser shall not contain any ozone depleting chemicals

3.3 Lotting. Lotting shall be in accordance with MIL-STD-1168.

4. PRODUCT CONFORMANCE PROVISIONS. The products provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5. PACKAGING. For acquisition purposes, the products shall be preserved, packed and marked as specified in the contract or purchase order (see 6.1).

6. NOTES.

6.1 Aquisition requirements. The contract or order should specify the following:

a. Title, number, and date of this specification and any amendment.
b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
c. Preservation, packing and marking (see 5.1 and 6.5).
d. Government loaned equipment (e.g. MOPP IV gloves).
e.. A brief description of the item to be purchased (type of disperser, agent type or class, and color).

6.2 Sources of documents.

6.2.1 Federal/Military standards. Federal and military standards are available from the Standardization Document Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 or http://assist2.daps.dla.mil/quicksearch.

6.2.2 Code of Federal Regulations. The Code of Federal Regulations in available from the Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402 or http://www.access.gpo.gov/nara/cfr/cfr-table-search.html.

6.2.3 United Nations. The IMDGC can be obtained from the International Maritime Organization, 101-104 Piccadilly, London WTV, England. The TDGA can be obtained from the International Civil Aviation Organization, 1000 Sherbroke Street West, Suite 400, Montreal, Quebec, Canada, H3A 2K2.

6.3 Other dispersers. Technical data on previous manually carried dispersers for riot control are available in EA-D-1023A and MIL-D-51413A(EA). Those items are no longer in production.

6.4 Carrier. One carrier demonstrated to be compatible with the manually carried riot control disperser and current Law Enforcement Ensemble is Model number 7307S, part no. 18204,

available from Bianchi International Company. Corresponding GSA number is GSAATIEMK4. This carrier is compatible with the maximum disperser size limits. An alternate carrier type may be proposed if it meets interface and interoperability requirements and is approved by the Government.

6.5 Packaging. The dispersers are classified as hazardous materials and all packaging must be certified in compliance with the Performance Oriented Packaging (POP) requirements of Annex 1 Part 7 of the International Maritime Organization – International Maritime Dangerous Goods Code (IMO – IMDGC); Chapter 7 of the International Civil Aviation Organization – Technical Instructions for Safe Transportation of Dangerous Goods by Air (ICAO–TDGA); and 49 Code of Federal Regulation (CFR) Transportation, Parts 107–178 as tested in accordance with ASTM D 4919, Testing of Hazardous Materials Packaging. Marking shall be in accordance with MIL–STD–129, IMO–IMDGC, ICAO–TDGA and 49 CFR. Unless otherwise required for the specific buy, packaging is to be Level A military packaging in accordance with MIL–STD–2073–1 validated in accordance with ASTM D4169.

6.5.1 Level A packaging. Dispersers are to be packaged Level A, 24 each upright in individual plastic tubes with lids, placed in "Egg Crate" separators, in a 13" x 9 1/2" x 8 1/2" outer fiberboard box with a pad in the bottom.

6.6 List of Figures.

Figure 1. Marking for Type 1 disperser (CS)

Figure 2. Marking for Type 2 disperser (OC)

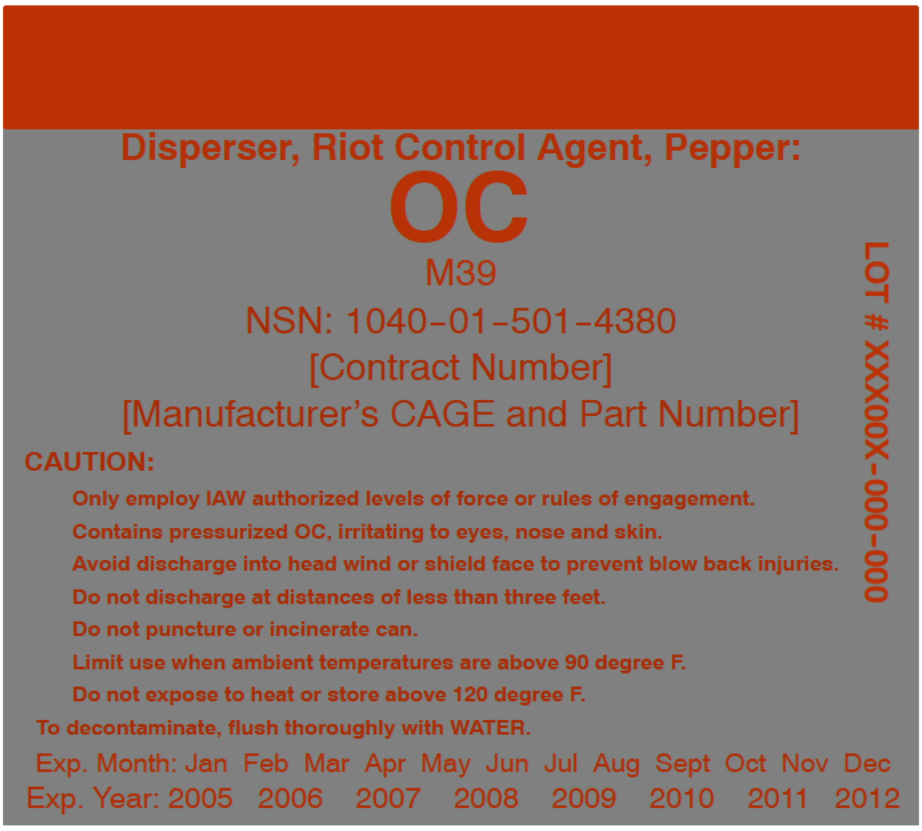

Figure 3. Marking for Type 3 disperser (Simulant)

6.7 Key words.

Incapacitation
Riot control

Military Interests:

Custodian:
Navy - MC
Army - EA

Civil Agency Coordinating Activities:

GSA - FSS (7FLE)

Preparing activity:
Army - EA

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