

**BY ORDER OF THE COMMANDER
BEALE AFB**

BEALE AFB INSTRUCTION 91-203

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Safety

MC 12 FLARE SAFETY



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This instruction implements AFMAN 91-201, *Explosives Safety Standards*. It establishes safety procedures for the buildup, handling, loading, storage and downloading of flares used on MC-12 aircraft. This instruction is applicable to wing agencies with operations involving MC-12 aircraft equipped with the AN/ALE – 47 Countermeasure Dispensing System (CMD5) on Beale AFB. Send comments and suggested changes to this instruction on AF Form 847, *Recommendation for Change of Publication* through channels to 9 RW/SEW, 19501 Edison Ave., Beale AFB CA 95903. Refer recommendation for changes and questions about this publication to the and questions about this publication to the Office of Primary Responsibility (OPR) 9 RW/SEW, 19501 Edison Avenue, Beale AFB, CA 95903 using the AF Form 847, *Recommendation for Change of Publication*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records* and are disposed of in accordance with the Air Force Records Information Management system (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>

1. Personnel Limits Personnel limits have been designed to ensure minimum exposure of personnel to explosives in compliance with the explosive safety cardinal principle. Supervisors are responsible for enforcing personnel limits.

1.1. Personnel limits are: One supervisor, two workers, and two casual observers.

1.2. Casuals are personnel not normally part of an explosive operation but have duties that require their presence (QA, Safety, and inspection team personnel).

1.3. Visitors are non-essential personnel with limited access. Supervisors will stop operations when visitors are present.

2. Explosive Limits Explosive limits are designed to ensure minimum exposure of personnel to explosives in compliance with the explosive safety cardinal principle. Supervisors are responsible for enforcing explosive limits. Building 1322 in the Munitions Storage Area (MSA) may contain explosives not used by L3 personnel. All personnel need to be aware of these hazards.

Table 1. MC-12 Flare information

Nomenclature	Hazard Class/Division	Fire Symbol	Net Explosive Weight (NEW)
M-206 Flare	1.3/G	3	.284lbs
M-211 Flare	1.3/G	3	.008lbs

Table 2. MSA Operations

Building 1322	Explosive Limits
1.1	3100lbs
1.2.1 ≤ 82	518lbs
1.2.2	5000lbs
(05)1.2.3 ≤ 82	5000lbs
1.3	2000lbs
1.4	MEQ

2.1. Licensed Facility

2.2. Explosive limits annotated on AF IMT 2047, Explosives Facility License will be strictly adhered to and will not exceed 100lbs NEW of hazard division 1.3.

3. Explosive Operating Locations.

3.1. Flare build-up operations will be performed at MSA Building 1322 Bay 2.

3.2. Flare up-load and download operations will be performed at aircraft parking spot L-1 A, B and C through L-9 A, B and C.

3.3. Flares will only be stored in the MSA or at an approved licensed location.

4. Safety Requirements

4.1. Only trained personnel under the supervision of an individual who understands the hazards and risks involved in the operation are to handle explosives.

4.2. Personnel who work with explosives will be trained in accordance with AFI 91-202 para 9.11.2 and qualified in the tasks to be performed.

4.3. All counter-measure load training will be performed by Contract Logistics Support (CLS) personnel.

4.4. Documentation of training will be kept in CLS personnel training records.

4.5. The M-206/211 Flares are electrically primed explosive devices and are subject to the following safety precautions:

4.5.1. Personnel must ground themselves before handling electrically primed explosives. Frequently re-accomplish this procedure during all explosive operations. Static grounding techniques listed in AFMAN 91-201 para 7.15. will be used.

4.5.2. The wear of static-producing clothing such as 100% nylon, rayon, wool, or polyester is prohibited as an outer garment. Personnel will not put on or remove garments while engaged in explosive operations.

4.5.3. Explosives must always be carried in approved containers; never carried in pockets, CTKs, or tool pouches.

4.5.4. Personnel should avoid pointing electrically primed explosives toward themselves, others, vehicles or aircraft.

4.6. Do not tumble, drag, throw, or roll explosives or containers with explosives.

4.7. Disassembly of any magazines is prohibited.

4.8. Modern mobile emitters (cell phone, PDA's, wireless computer network equipment etc.) and mobile radios will not physically be located within 10ft of any electro-explosive device.

4.9. Ensure adequate lighting when uploading/downloading explosives during hours of dusk/darkness.

4.10. Do not remove explosive lot number or date of installation markings on the side of loaded magazines.

4.11. Supervisors will ensure all personnel remove watches, rings and jewelry prior to handling explosives.

4.12. Flare loaded aircraft will be downloaded prior to entering maintenance hangars.

4.13. Aircraft parked on spots adjacent (left or right of aircraft) to flare loading/downloading operations will not run engines, be serviced with gaseous oxygen, or fueled/defueled.

4.14. Flare loading and unloading operations will not be accomplished, or flare loaded aircraft parked, at any time in the following locations:

4.14.1. Aircraft Maintenance Hangars.

4.14.2. Aircraft Wash Rack

4.15. The use of flare loaded aircraft for static display or exercise scenarios is prohibited.

4.16. Two serviceable 2A:10BC fire extinguishers will be present at all explosive operations and on transport vehicles.

4.16.1. One fire extinguisher will be mounted on the exterior driver's side and one will be mounted inside the cab, readily accessible to the driver.

4.17. Steel toe boots will be worn by CLS personnel involved in an explosive operation.

4.18. Vehicles transporting explosives will be chocked during loading and unloading.

4.19. Vehicles transporting explosives will be properly placarded on all four sides.

4.20. Vehicles transporting explosive will travel directly to and from the MSA and licensed facility in the most direct route possible.

4.21. Transport vehicles and munitions trailers will be inspected for serviceability prior to use.

4.22. A crew brief will be accomplished prior to the start of any explosive operation. (See attachment 2)

4.23. Smoking is prohibited within 50ft of any explosive operation and limited to approved designated smoking areas within the MSA.

4.24. Flame and spark producing devices will not be used in the area of explosive operations.

4.25. Explosive facility license quantities will not be exceeded.

4.26. Serviceable flares will be segregated from unserviceable flares.

4.27. When lightning is within 5nm of Beale AFB all explosive operations will cease.

4.28. When winds exceed 35kts, all flight line munitions operations will cease.

5. Munitions Transportation.

5.1. Transportation vehicles will be inspected for serviceability and safety prior to use.

5.2. Explosive laden vehicles will be placarded with appropriate DoT placards.

5.3. Vehicles transporting explosives will only use a direct route to and from the MSA and Explosive licensed facility.

5.4. Vehicles transporting explosives to and from the MSA will only stop in an emergency situation.

5.5. Explosive laden vehicles will be chocked when parked.

5.6. Refueling of explosive laden vehicles is prohibited.

5.7. Explosive transportation will be accomplished IAW T.O. 11-1-38, *Positioning and Tie-down Procedures Non-Nuclear Munitions* and AFMAN 91-201.

5.7.1. Munitions will be tied down in a manner that prevents movement and provides security for the explosives being transported.

6. Emergency Actions

6.1. Hung Flare

6.1.1. Aircraft with hung flares will follow Hung Flare Procedures outlined in BAFBI 11-250.

6.1.2. In the event of a hung flare or explosive incident/accident involving flares, MOC will run appropriate QRC and must immediately notify the Fire Protection Flight, EOD, 9RW Safety, MXG QA, CLS personnel and 9 MUNS/Control.

6.1.3. All aircrews who expend flares will perform a check for hung flares once clear of the runway.

6.1.4. In the event of a hung flare, aircrews will notify ATC, declare an emergency and taxi the aircraft to the designated hung flare area on taxiway M. If Taxiway M is unavailable (i.e. nighttime, closed for repairs, in use by other aircraft), the hazardous cargo spot on Taxiway F will be used. Once in the hung flare area, the aircraft will be shut down using normal procedures. Responding EOD teams will analyze hazards and direct safing of flares by CLS personnel.

6.1.5. Damaged or hung flares will be downloaded by CLS personnel only after EOD determines there are no additional hazards, prior to moving the aircraft to the main ramp area. (Note: Contractor personnel will perform all weapons functions).

6.1.6. Once the aircraft is safe, CLS maintenance personnel will tow the aircraft to the parking ramp and the crew will be transported to their squadron. CLS personnel will perform all required maintenance actions, to include removing the associated flare module, to determine the cause of the condition and any required remedy.

6.2. Explosive Operation Emergencies

6.2.1. If an emergency situation is encountered inside the MSA, stop operations in the immediate area, sound an alarm, radio munitions control and evacuate the appropriate distance for the hazard located in the facility.

Table 3. Hazard Class

Hazard Class	Evac Distance Fire/No Fire
1.1	2500ft/300ft
1.2	2500ft/300ft
1.3	600ft/300ft
1.4	300ft/300ft

6.2.2. If an emergency situation is encountered during transportation, storage, upload or download operations, stop operations in the immediate area, sound alarm, radio MOC and evacuate the appropriate distance for the hazards involved.

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Commander, 9th Reconnaissance Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 August 2011

AFMAN 91-201, *Explosives Safety Standards*, 12 January 2011

T.O. 11-1-38, *Positioning and Tie-Down Procedures Non-Nuclear Munitions*

Adopted

AF Form 847, Recommendation for Change of Publication

AF IMT 2047, *Explosives Facility License*

Acronyms and Abbreviations

CMDS—Countermeasures Dispensing System

CLS—Contract Logistics Support

IAW—In Accordance With

MOC—Maintenance Operations Center

QRC—Quick Reaction Checklist

QA—Quality Assurance

MSA—Munitions Storage Area

DoT—Department of Transportation

EOD—Explosive Ordnance Disposal

ATC—Air Traffic Control

Attachment 2

EXPLOSIVE OPERATION PRE-TASK BRIEFING

Figure A2.1. Explosive Operation Pre-Task Briefing

NOTE: Call Munitions Control prior to starting any explosive operation in the MSA.		
1. OPERATION OULINE		
OPERATION TO BE PERFORMED:		
LOCATION OF OPERATION:		
CREW CHIEF NAME: _____	PERSONNEL LIMITS ARE	
CREW MEMBERS: _____	SUPERVISORS: _____	
_____	CREW MEMBERS: _____	
_____	CASUALS: _____	
2. SAFETY REQUIREMENTS		
HIGHEST HAZARD		
FOR		
OPERATION	HC/D	AREA
_____	_____	_____
EXPLOSIVE HAZARDS _____		
OTHER HAZARDS _____		
WITHDRAWAL DISTANCE _____		
NET EXPLOSIVE WEIGHT OPERATING LIMITS FOR THIS OPERATION:		
NEW OF 1.3G EXPLOSIVES AT BUILDING 1322 WILL NOT EXCEED 2000LBS.		

NEW OF 1.3G EXPLOSIVES AT AIRCRAFT IS LIMITED TO A SINGLE A/C LOAD.
NEW OF 1.3G EXPLOSIVES AT LICENSED LOCATION WILL NOT EXCEED 100LBS.
Verify support equipment is located at least 25' from facility and or operation.
Brief evacuation point for an explosive mishap is
Brief evacuation point for an explosive mishap involving fire is
Brief required safety equipment for this operation is
Brief all personnel to remove all rings, watches and jewelry.
Brief all step-by-step procedures while performing the task (refer to specific steps in the TO for applicable portions of the operation).
Brief applicable drop distances for the munitions involved. _____
Brief hand held radios or cell phones will not be transmitted within 50ft of electro-explosive devices (EED).
Brief situation awareness considerations:
WEATHER CONDITIONS
TERRAIN
VISIBILITY & LIGHTING
LOAD/ASSET CONFIGURATION
TRIPPING HAZARDS

Attachment 3

EMERGENCY PROCEDURES

Figure A3.1. Emergency Procedures

_____ will notify Munitions Control or MOC of the mishap/accident and record the time that munitions were engulfed in flames.
Fire Fighters are: _____ and _____
NOTE:
ENSURE TWO SERVICEABLE FIRE EXTINGUISHERS ARE AVAILABLE PRIOR TO THE START OF THE OPERATION.
NOTE:
THE GOAL OF FIREFIGHTING IS TO PREVENT FIRE FROM COMING IN CONTACT WITH MUNITIONS. A FIRE ENGULFING MUNITIONS WITH A HAZARD CLASS OF 1.3 OR HIGHER WILL ONLY BE FOUGHT IF A RESCUE ATTEMPT IS BEING MADE.
_____ will evacuate all nonessential personnel.
_____ will direct the fire and or emergency vehicles to the scene of the mishap.
NOTE:
LEAVE VEHICLE GATES OPEN FOR EMERGENCY VEHICLE RESPONSE
IMPORTANT TELEPHONE NUMBERS:
FIRE/POLICE/MEDICAL EMERGENCY: 911
EXPLOSIVE ORDINANCE DISPOSAL: 634-9070
MAINTENANCE OPERATIONS CENTER: 634-5750
WEAPONS SAFETY: 634-8875
MUNITIONS CONTROL: 634-8249/9050