3Rs Explosives Safety Guide

Recycling Industry

Recognize
Retreat
Report

A rigorous inspection process, proper documentation and a formal offer for sale are key to ensuring munitions debris, range-related debris and other materials (collectively referred to here as munitions-related materials) do not pose an explosive hazard to Department of Defense (DoD) personnel or the public. DoD goes to great lengths to ensure that material that potentially poses an explosive hazard (MPPEH) is not released to the public. Purchasing recyclable munitions-related materials directly from DoD provides buyers confidence the material is safe to process.

DoD collection, inspection and segregation area for munitions materials

Munitions-related materials, whether from a DoD industrial facility or an operational training or test range, go through a formal process that normally includes at least two independent inspections. DoD developed this process to ensure only material documented as safe or MDAS is released to the public, which includes the recycling industry. Materials determined by this process or that is known to pose a potential explosive hazard are classified as material documented as an explosive hazard or MDEH. Such material can only be released to vendors who have verified qualifications to manage and process MDEH safely.

Materials for which the explosives safety status is documented as safe (i.e., MDAS) may be sold to the scrap recycling industry through DoD's Defense Logistics Agency (DLA). Compliance with DoD policy for the management and disposition of material potentially presenting an explosive hazard (MPPEH)(see DoD Instruction 4140.62, "Material Potentially Presenting an Explosive Hazard") ensures the material purchased can be safely processed at scrap recycling facilities. After compliance with this policy, released material should no longer resemble intact munitions.

Although DoD works hard to ensure the public is safe from the explosive hazards potentially associated with munitions-related materials, peddlers (scrappers) sometimes trespass on DoD operational ranges to collect metal. Peddlers sell this metal, which may contain live munitions, to recyclers. Too frequently, metal sold by peddlers has been found, after an explosive incident, to contain unexploded ordnance or

UXO, also commonly referred to as "duds." The scrap recycling industry can protect its workers and assets by only purchasing munitions-related materials from authorized DoD sources and ensuring such material has been documented as safe. Material that has been documented as safe (i.e., MDAS) will not have un-vented cavities and should be accompanied by paperwork documenting the materials' explosives safety status.

UXO and other munitions can injure or kill employees or members of the public, or damage equipment. Incidents involving military munitions will require the support of emergency responders, including military experts, and most likely will result in an investigation by law enforcement, the regulatory community or a combination of both. Such scrutiny can cause a loss of business and may result in penalties or fines.

Two peddlers were seriously injured while collecting metal from a range. Law enforcement closed several recycling yards during the investigation while military explosive ordnance disposal personnel cleared the yards of live munitions.

Nearly every recycler has heard stories about tragedies and narrow escapes involving live munitions. A few recyclers have had personal experiences. The below describes recent incidents, involving metals purchased from peddlers.

In 2008, peddlers sold munitions they stole from a DoD firing range to a North Carolina recycler. Some of these munitions detonated injuring two workers, damaging a building, and requiring evacuation of surrounding neighborhoods. In 2013, two people were seriously injured while illegally collecting metal on a DoD range in Texas. Recognizing the threat, the Federal Bureau of Investigation inspected 90 local recyclling facilities; discovering live munitions at four of these facilities. As a result, military explosive ordnance disposal personnel (referred to as EOD personnel) responded to address disposal of the munitions. Fortunately, no further injuries occurred, but the investigation disrupted business.

Can the recycling industry do anything to prevent incidents involving munitions-related material and minimize business disruptions? Like other commodities, the recycling industry needs to know the source of material purchased and how it was processed. Workers inspecting and purchasing inbound materials intuitively have a sense for identifying individuals potentially selling stolen materials. That intuition and the ability recognize military munitions and potential explosive hazards associated with other munitions-

related material gives the recycling industry a powerful tool for protecting their workers, the public and their business.

Unfortunately, it may be difficult to know whether metal purchased from another yard includes munitions-related material, including live munitions, that was purchased from peddlers and has been mixed with metals properly processed by the DoD. Protect your business and workers by knowing the source of the metals purchased, inspecting it prior to purchase and during processing. If you know or suspect material may contain live munitions or an explosive hazard, or suspect you may have encountered a live munition, follow the 3Rs of Explosives Safety (Recognize, Retreat, Report). Never guess, know. Do not handle potentially explosive materials until EOD or other qualified personnel (e.g., police bomb squad) determines the material is safe.

1Recognize

Once workers recognize that munitions are dangerous, the risks they pose is real, and DoD only sells munitions-related material through a formal process, they can more easily identify and prevent live munitions from entering a yard.

Inspection of range residue during turn in to DoD salvage yard

Recognizing when you may have encountered a munition and the potential danger posed is the most important step in reducing the risk of injury or death. Because munitions pose a potential explosive hazard, munitions-related materials offered for recycling by sources other than DoD or a DoD contractor should be treated with extreme caution. Buyers need to know the origin of material and exactly how it was processed. Ideally, a buyer should never purchase, touch, move or disturb (handle) munitions from other sources , particularly peddlers. Be very cautious when purchasing munitions from the secondary market.

Training grenades have a small explosive charge that upon functioning causes a "flowered" opening on the bottom. Training grenades are similar in appearance to grenades with either a solid aluminum slug or a high explosive-fill.

Remember, DoD follows specific policies and procedures to help ensure only material documented as safe or MDAS is released to the public. Whether complete or in pieces, munitions or suspect munitions should be considered extremely dangerous unless the manner in which it was managed and processed is known to have eliminated potential explosives hazards. If unsure about the safety of munitions or other material, do the right thing ... ask for help!

Bombs properly processed to allow inspection prior to release for recycling.

How can you recognize potentially dangerous material? First, be cautious and carefully inspect inbound materials. Second, know that DoD sales typically involve a bidding process, and auction lots tend to be large. If you purchase directly from DoD, documentation as to its explosives safety status should be provided. If not, ask for it. If necessary, contact the DoD entity that sold the material to determine whether it was properly managed and processed, and to request documentation of its explosives safety status.

Munitions come in many shapes and sizes; some can be hard to recognize. Because several munitions contain high-value metals, peddlers risk entering operational ranges to collect them for later sale. Train buyers to recognize munitions and their components but know that certain munitions are more commonly collected by peddlers than others. If a load of scrap arrives that you know or suspect may contain live munitions that causes concern about the potential explosive hazards posed, immediately stop operations in the area. **Recognize - that munitions are dangerous, Retreat - Do not approach, touch, move or disturb it, keep others away, Report - notify the foreman or in the foreman's absence, call 911 for support.**

Warning signs that munitions-related material, like munitions bodies, have not been properly managed and processed include:

- There are only a few munitions.
- Munitions - larger than .50 caliber - are intact, with internal cavities that are not open (vented) for inspection. Properly processed munitions will be shredded, cut in pieces or have holes drilled through them so each cavity can be inspected.
- Source of the material is unknown.

Preparing to inspect munitions-related materials to determine explosive safety status.

ORetreat

If you encounter or suspect you may have encountered a munition, do not approach, touch, move or disturb it. Instead, carefully retreat from the area.

- Immediately stop all activities in the area, warning others of the potential danger.
- Move away from the area and keep others away from it!

Unfortunately, munitions are often popular, but potentially deadly souvenirs. Taking a munition for a keepsake presents an immediate and real danger to you. Bringing one home endangers your family, your friends and your community. Don't be tempted to keep it as a souvenir!

OReport

When you encounter or suspect you have encountered a munition, protect yourself, your co-workers and the public by immediately reporting munitions or suspect munitions to your foreman, your site supervisor, or by calling 911.

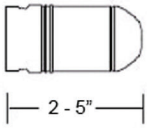
Provide as much information as possible about what you saw and where you saw it. This will help the police and EOD personnel find, evaluate and address the situation.

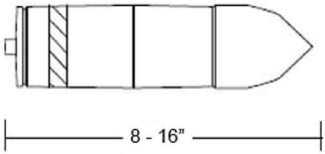
If you believe or suspect you may have encountered a munition, report the following:

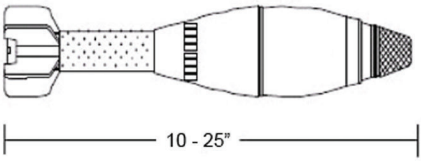
- The area where you encountered it.
- The source of the material, if known.
- Number or volume of items of concern.
- A general description of the material (e.g., munition) including:
  - Its size,
  - Its shape,
  - Readily visible markings, but -- do not approach or handle the munition to see the markings.

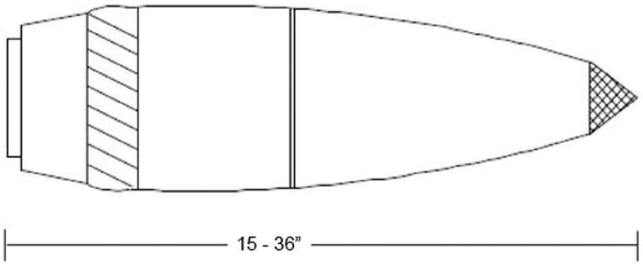
Mixed metals containing material potentially presenting an explosive hazard.

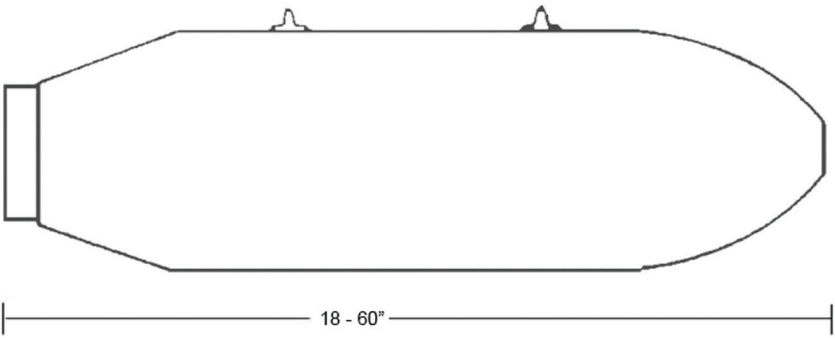
MUNITIONS COMMON SIZE AND SHAPE PROFILES











Don't Forget

- Munitions are dangerous and may not be easily recognizable!
- Know the source of the materials you purchase and how it was managed and processed to ensure it is safe!!
- Never touch, move or disturb a munition, if you know or suspect an explosive hazard is present!

Follow the 3Rs

Recognize

When you may have encountered a munition and that munitions are dangerous.

Retreat

If you know or suspect an explosive hazard, do not approach, touch, move or disturb the it, but carefully leave the area.

Report

Immediately notify the police and provide a description of the item.

Emergency contact:

Call 911

(Insert contact information here)

For additional information call
U.S. Army Technical Center for Explosives Safety
at (918) 420-8919

or see

the US Army's UXO Safety Education website
www.denix.osd.mil/uxo

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