



THE FACTS ON SMALL ARMS-RELATED HAZMAT

For packages containing small arms ammunition or components



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration



[HTTPS://CHECKTHEBOX.DOT.GOV](https://checkthebox.dot.gov)

The contents of this guide do not have the force and effect of law, and are not meant to bind the public in any way. The guide is intended only to provide information to the public regarding existing requirements under the Hazardous Materials Regulations.

As a shipper, it is your responsibility to ensure any shipments of small arms ammunition or components are in full compliance with the relevant regulations.

SMALL ARMS AMMUNITION AND COMPONENTS

Are you planning to send or receive small arms ammunition or related components? You need to know that some of these items may be hazardous and that **you** are responsible for shipping them safely.

Examples of small arms and related components that might be regulated as hazardous materials:

- Ammunition
- Propellants (e.g., smokeless powder, black powder, other solid propellants)
- Primers
- Percussion Caps
- Empty primed cartridge cases
- Tritium night sights
- Lithium batteries contained in lasers, red dot sights, and tactical flashlight attachments
- Firearm cleaning materials (e.g., bore cleaner)
- Aerosols (e.g., case lubricant for reloading, spray paints, coatings)

This list provides examples of common small arms-related items that may be considered hazardous while in transport. These are types of goods that firearm enthusiasts often use recreationally for competition shooting, hunting, or personal protection.

Propellants and primers are explosive materials, while some of the other listed items may contain explosives or other hazardous materials such as lithium batteries. Because of this, these items are regulated as hazardous materials for transportation purposes.

To determine whether any item is hazardous for transportation, a good starting point is to locate the Safety Data Sheet (SDS)* for the specific item before shipping. The SDS should be available from the manufacturer and provide the transportation classification for the item if it is regulated as a hazardous material. Verify the information on the SDS with the manufacturer and confer with the Pipeline and Hazardous Materials Safety Administration (PHMSA), an agency of the US Department of Transportation (DOT), for more information, as necessary, through the Hazardous Materials Information Center.

For explosive hazardous materials such as propellants, primers, and certain ammunition cartridges, you must locate the EX Approval for the item. The EX Approval is generally issued to the manufacturer of the item by PHMSA. This approval provides the transportation classification for the explosive material and approves the explosive material for transportation. This classification and approval help to ensure that the items can be safely transported and will be correctly handled throughout the transportation process.

If you manufacture any hazardous materials or items containing hazardous materials, you are responsible for determining the transportation classification**. If your item contains an explosive substance or is an explosive substance, you are responsible for working with the US DOT/PHMSA to obtain an EX Approval for your item before offering your item for transportation.

Remember: Per 49 CFR § 173.22, as a shipper, it is your responsibility to know whether a product is hazardous and to package the material properly with the correct hazard communication (e.g., markings, labels, and shipping documentation). Always be sure to communicate what your material is when you offer it to a carrier.

* CAUTION: An SDS may contain incorrect information or multiple possible classifications. It is ultimately the responsibility of the shipper to classify the product correctly. If you are the manufacturer of your product and you are also the initial shipper, you must provide the correct hazard classification for transportation. This is usually accomplished through testing. For explosive materials, except for certain cartridges for small arms, classification must be done through the DOT EX Approval.

** The U.S. Department of Transportation has established specific transportation hazard classification criteria for materials based on their chemical and physical properties (e.g., flammability, corrosivity, toxicity). Be sure to identify any hazards when shipping products. It is your responsibility to know whether the product is hazardous and to communicate those hazards appropriately! See 49 CFR § 173.22.

SMALL ARMS BLANK

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EX APPROVALS

EX Approvals are approvals issued by the US DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA), generally to manufacturers of explosive substances or items that contain explosive substances. The EX Approval approves and classifies the explosive item for transportation. In addition, some EX Approvals contain important packaging requirements for the material or other conditions for shipping.

You can find the EX Approval for any material by using the Hazardous Materials Approvals Search Page:
<https://www.phmsa.dot.gov/approvals-and-permits/hazmat/approvals-search>.

You can also contact PHMSA's Energetic Materials Division, via email, at explo@dot.gov or by phone at 202-366-4511.



Remember: Failure to comply with regulations can result in injury or death, plus substantial fines, or other enforcement actions against you as the shipper.

EXPLOSIVE MATERIALS

Small arms ammunition and components such as propellants, primers, percussion caps, and empty primed cases contain or are explosive materials. They are considered hazardous materials for transportation purposes and can pose serious safety risks when not handled or packaged correctly.

Do you intend to ship any of the materials above? Because these items are explosive hazardous materials, they require a valid Explosives (EX) Approval issued by the US Department of Transportation (DOT) before shipping. Only certain assembled ammunition is excepted from EX Approval requirements (see 49 CFR § 173.56(h) for a list of eligible ammunition).

The safe transportation of these explosive materials strongly depends on using the correct packaging in accordance with the DOT EX Approval (if packaging is specified in the approval) and the Hazardous Materials Regulations (HMR). Using the correct inner packaging is extremely important – you should never change or modify the required inner packaging containing the material (e.g., bottles, trays). The inner packaging must comply with the requirements in the EX Approval. The outer packaging (e.g., fiberboard box) must also comply with the EX Approval and any performance-oriented packaging requirements. Only tested and certified packaging configurations and components, as specified in the EX Approval, may be used. Other additional packaging requirements will be outlined in the EX Approval and the applicable Packaging Instruction in the Explosives Table (see § 173.62(b) of the HMR). You may not modify or substitute the specified packaging components in any way!

All other requirements of the HMR apply to these explosive shipments, including training (subpart H of part 172), shipping papers (subpart C of part 172), and package markings (subpart D of part 172)/labels (subpart E of part 172), unless there is a specific written exception to these requirements in the HMR or a DOT Special Permit (DOT-SP).

Always notify the carrier service you are using exactly what you intend to ship and be fully transparent in any communications with them.

SMOKELESS POWDER & OTHER SOLID PROPELLANTS

Smokeless powders and other solid propellants (e.g., muzzleloading propellants) that are used as powder for small arms may be classified by the US DOT as a Division 1.1, Division 1.3, or Division 1.4 explosive material. This classification is found in the EX Approval for the material.

Division 4.1 Reclassification

Propellants that have been classed as Division 1.3C (UN0161) or Division 1.4C (UN0509) smokeless powder may be reclassified to “Smokeless powder for small arms,” Division 4.1 hazard class (flammable solid material) for domestic transportation. Like the original explosive classifications, this reclassification requires an EX Approval from the US DOT. In addition, other solid propellants (e.g., muzzleloading propellants) that are used as powder for small arms may be eligible for this same reclassification with an EX Approval from the US DOT. The Division 4.1 hazard class designation (NA3178) is subject to very specific conditions listed in § 173.171 of the HMR.

As a shipper, you must refer to the EX Approval for the propellant to ensure that it is eligible to be shipped as a Division 4.1 material (NA3178). In addition, you must package the material as specified by the EX Approval in packaging that has been specifically tested and certified to prevent leakage. Remember: Do not repackage materials unless you are able to do so in full conformance with all HMR packaging requirements!

There are also strict quantity limitations of reclassified smokeless powder per transport vehicle. It is imperative that you work with your chosen carrier to let them know that you are shipping “Smokeless powder for small arms.” The total quantity of smokeless powder on a vehicle may not exceed 45.4 kg (100 pounds) net mass. Remember: Always communicate with your chosen carrier service that your shipment includes smokeless powder for small arms.

BLACK POWDER

Black powder may be classified by the US DOT as a Division 1.1 explosive material. This classification is found in the EX Approval for the material.

Division 4.1 Reclassification

Black powder that has been classed as a Division 1.1 (UN0028 or UN0027) may be reclassified to “Black powder for small arms,” Division 4.1 hazard class (flammable solid material). Like the explosive classifications, this also requires an EX Approval from the US DOT. The Division 4.1 hazard class designation (NA0027) is subject to very specific conditions listed in § 173.170 of the HMR.

As a shipper, you must refer to the EX Approval for the black powder to ensure that it is eligible to be shipped as a Division 4.1 material (NA0027). In addition, you must package the material as specified by the EX Approval in packaging that has been specifically tested and certified to prevent leakage. Remember: Do not repackage materials unless you are able to do so in full conformance with all HMR packaging requirements!

There are also strict quantity limitations of black powder per transport vehicle. It is imperative that you work with your chosen carrier to let them know that you are shipping "Black powder for small arms." The total quantity of black powder on a vehicle may not exceed 45.4 kg (100 pounds) net mass. Remember: Always communicate with your chosen carrier service that your shipment includes black powder for small arms.

PRIMERS/PERCUSSION CAPS

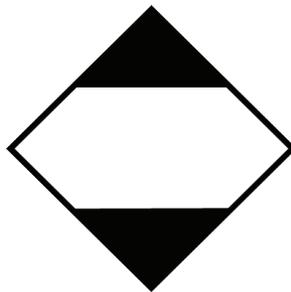
Primers and percussion caps are explosive materials. The exact explosive classification and required packaging configuration, if applicable, are found in the product’s EX Approval. Remember: Do not repackage materials unless you are able to do so in full conformance with all HMR packaging requirements, and always communicate with your chosen carrier that your shipment includes primers or percussion caps!

AMMUNITION

Assembled ammunition is an explosive material. As with propellants and primers, the exact explosive classification and any packaging configuration requirements are found in the product's EX Approval. However, certain types of ammunition for small arms can be classified by the manufacturer as a Division 1.4S explosive material without an EX Approval (see § 173.56(h) for a list of eligible ammunition). Remember: Always work with the ammunition manufacturer to find out this information.

LIMITED QUANTITY

Certain Division 1.4S ammunition for small arms can be shipped as a limited quantity material. The limited quantity requirements for eligible ammunition are found in §173.63(b) of the HMR. This section of the HMR contains the list of eligible ammunition types and packaging requirements. You should note that 22 caliber rim-fire is the only completed firearms cartridge that may be packaged loose in strong outside packaging (see § 171.8 definition). All other ammunition shipped as a limited quantity material will have certain inner packaging or partition requirements.



CASES, CARTRIDGES EMPTY WITH PRIMER

Empty cartridges and cases are regulated as hazardous materials for transportation. However, “Cases, cartridge, empty with primer” (UN0055 or UN0379) that are made of metallic or plastic casings and classified as a Division 1.4 explosive material are excepted from regulation (See Special Provision 50 in §172.102) for domestic transportation only. Remember: Always work with the ammunition manufacturer or reference any applicable EX Approval to find out this information.

NOTE:

Any person who offers or transports a hazardous material in commerce must comply with applicable training requirements in the HMR.

Each hazmat employer must train and test their hazmat employees, certify their training, and develop and retain records of current training that meets the requirements in § 172.704 of the HMR.

STEPS TO SAFELY SHIP HAZMAT ITEMS

Note: These general steps do not provide an exhaustive list of all hazardous materials shipping requirements and are only meant to provide a general overview of the HAZMAT shipping process. This list is not a substitute for following all applicable regulations, including training requirements. Failure to comply with regulations or training requirements (subpart H of part 172) can result in substantial fines or other enforcement action.

1 LOCATE THE HAZARDOUS MATERIAL CLASSIFICATION*

(Part 173)

Obtaining the correct hazard classification is the most important part of shipping HAZMAT. All other requirements, including packaging, markings, labels, and shipping paper requirements, will be based on the hazard classification of a product. The DOT HAZMAT regulations provide classification criteria that manufacturers, shippers, and others can use to classify hazardous materials. However, most explosives, except for certain ammunition cartridges, require PHMSA's classification approval prior to shipment through an EX Approval.

As a general starting point, look up either the product's SDS** for non-explosive materials or the EX Approval for explosive materials. Most non-explosive consumer products that come from reputable manufacturers will have an SDS that includes a transportation classification for the product. For most explosive materials, the EX Approval will include the transportation classification for the material.

This classification provides a four-digit UN ID number, a proper shipping name, hazard class/division number, and compatibility group for the product. For non-explosive materials, use this information to identify the correct entry on the Hazardous Materials Table (HMT) (see §172.101). For explosive materials, if directed by the EX Approval, locate the assigned entry in the Explosives Table (see § 173.62(b)).

The HMT contains references to the appropriate packaging requirements, certain quantity limitations, and any special provisions or exceptions. The HMT also contains label codes and the basic description for the material. The EX Approval or, if directed by the EX Approval, the Explosives Table, contains packaging instructions for explosive hazardous materials.

2 DETERMINE QUANTITIES AND SELECT PACKAGING

(HMT in Part 172, Part 173, and/or EX Approval)

For explosive materials, select the appropriate packaging based on the EX Approval (or the assigned Packaging Instruction in the Explosives Table, if directed by the EX Approval). For non-explosive materials, select the appropriate packaging based on the referenced packaging requirements on the HMT (see Column 8 of the HMT entry for the material).

Always be sure to use the specified packaging for your material. Depending on the HAZMAT and quantity, performance-oriented packaging (UN Standard or DOT Specification packaging) may be required.

3 PACKAGE YOUR MATERIAL

(Part 173, and/or EX Approval)

Package your HAZMAT according to the packaging requirements in part 173 of the HMR or the EX Approval, if applicable. Performance-oriented packaging may be required depending on the HAZMAT classification and quantities shipped. Performance-oriented packaging, if required, is specifically designed and tested to contain various kinds of HAZMAT. You must follow the packaging manufacturer's instructions on how to assemble and close the packaging. This includes using the specified inner and outer packagings, and closure materials, as applicable. Deviating from the manufacturer's instructions could result in a design change that would render the packaging unapproved and compromise the integrity of the packaging, which could result in a release of HAZMAT.

4 MARK AND LABEL YOUR PACKAGE

(Subparts D and E of Part 172)

Apply the appropriate hazard communication to your package. This can include, but is not limited to, orientation arrows for liquids, shipper's information, identification number and proper shipping name markings, and hazard class labels. Additional markings, such as the applicable EX Approval number, may be required.

5 PREPARE SHIPPING PAPER

(Subpart C of Part 172)

If required, prepare a shipping paper that contains a description of the HAZMAT, including the UN identification number, proper shipping name, and hazard class, as well as the packing group, quantity, number and type of packages, net explosive weight (if required), emergency contact information, and a shipper's certification. Additional information may be required, such as the applicable EX Approval number. In some cases, such as under limited quantity provisions for ground shipments, shipping papers are not required.

6 OFFER YOUR PACKAGE TO YOUR CARRIER OF CHOICE

Be sure to work closely with your carrier to identify any additional carrier requirements to ensure that your package arrives at its destination quickly and safely. Please note that as a government agency, the US DOT does not endorse or recommend a specific vendor.

While the steps listed above are not a substitute for training or review of the regulations, they can help you get started shipping products containing hazardous materials.

Please note that the United States Postal Service (USPS) does not accept small arms ammunition and other explosive materials or items that contain explosive materials (e.g., propellants [smokeless powders, black powders, other solid propellants] primers/ percussion caps, empty primed cartridge cases) for shipment. For a full listing of other USPS restricted and prohibited hazardous materials and hazardous material shipping requirements, refer to Publication 52 at <https://pe.usps.com/text/pub52/welcome.htm>.

* The U.S. Department of Transportation has established specific transportation hazard classification criteria for materials based on their chemical and physical properties (e.g., flammability, corrosivity, toxicity). Be sure to identify any hazards when shipping products. It is your responsibility to know whether the product is hazardous and to communicate those hazards appropriately!

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FOR ADDITIONAL INFORMATION CONTACT:

The Hazardous Materials Info Center

1-800-HMR-4922

(1-800-467-4922)

Email: infocentr@dot.gov

<https://phmsa.dot.gov>

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