EDUCATION AND TRAINING

A Foreign Military Sales Primer on Hazardous Materials: What Are Competent Authority Approvals? and Why Are They Required for Foreign Military Sales Shipments?

By
Paula Lockhart
Defense Institute of Security Assistance Management
Joseph Dugan
Military Surface Deployment Distribution Command
and
Orris Groenenboom
United States Army Security Assistance Command

The Military Surface Deployment Distribution Command (SDDC), U.S. Department of Transportation (DoT), Defense Security Cooperation Agency (DSCA), foreign military sales (FMS) transportation community, and Department of Defense (DoD) Material Manager Safety Offices seek to clarify and update existing procedures for the shipment of hazardous materials (HAZMAT) to FMS customers – especially explosive HAZMAT. All HAZMAT must be properly packed, labeled, and documented before shipment. However, the most important task of the FMS community at-large is to ensure that FMS customers have proper documentation for shipping HAZMAT Class 1 explosives, and that FMS customers know how Competent Authority Approval (CAA) requirements apply to them. This article provides a brief overview on how to identify and process HAZMAT shipments and discusses the more urgent topic of problems concerning CAA requirements. This paper addresses topics lacking in current guidance, difficulties associated with fixing the problems, and procedures that are being considered to fix these problems. A frequently asked questions (FAQ) section is provided at the end of this article.

What are Hazardous Materials?

HAZMAT items are materials that are dangerous in and of themselves, usually for chemical reasons. HAZMAT can damage or destroy property and cause health problems, and sometimes even death, if they leak, break, evaporate, or react when improperly stored or packed. Transportation hazard communication requirements are fulfilled by assuring that proper marking, labeling, and documentation standards are in full compliance. These standards help ensure that transportation workers and the general public are cautious of HAZMAT and know what to do in the event of an in-transit accident or other incident. The DoT and international HAZMAT regulatory organizations segregate dangerous goods – or HAZMAT – into nine (9) classes. The listing below is from the DoT HAZMAT regulation published in 49 CFR 173.2, Hazardous Materials Classes and Index to Hazard Class Divisions. The purpose of segregating HAZMAT into classes is to identify the hazard risk to health, safety, and property when transported. An item falls into Class 1 when the predominant hazard is an explosive reaction. Gases fall into Hazard Class 2, and so forth.

Hazard Classes (HC) Class Category	
1	Explosives
2	Gases
3	Flammable Liquids
4	Flammable Solids
5	Oxidizing Substances &Organic Peroxide
6	Toxic & Infectious Substances
7	Radioactive Materials
8	Corrosives
9	Miscellaneous Dangerous Goods

Shipping Hazardous materials

HAZMAT moves everywhere. HAZMAT is transported within, through, and between countries. National and international agencies monitor and regulate HAZMAT to make sure that it moves safely. Any country that moves HAZMAT has a competent authority (CA). The CA controls and regulates the movement of HAZMAT within its own country by researching and classifying new HAZMAT items and publishing HAZMAT regulations.

National CAs meet, confer, and work with each other to produce international rules and regulations to ensure the safe movement of HAZMAT worldwide. The two primary international organizations that regulate worldwide HAZMAT deliveries are the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO). The ICAO publishes technical instructions for international air shipments, which are assimilated for easier use in the *International Air Transportation Association's* (IATA's) *Dangerous Goods Regulation*. The IMO publishes the *International Maritime Dangerous Goods* (IMDG) Code for ocean HAZMAT shipments. The *Dangerous Goods Regulation* and IMDG address all classes of hazardous material.

The DoT is the only recognized CA for the United States Government (USG). The DoT publishes HAZMAT rules and regulations under Title 49, Parts 100-199, of the *Code of Federal Regulations* (49 CFR 100-199). The CFR outlines the legal requirements for preparing hazardous material for transportation by rail, air, vessel, and motor vehicles within the Continental United States (CONUS). ICAO, IATA, and IMO regulations apply to HAZMAT shipments that exit the U.S. All shippers of dangerous goods must follow these regulations. For DoD shipments, the following DoD regulations apply:

- DoD 4500.9-R: *Defense Transportation Regulation* (DTR)
- *Air Force Interservice Manual* (AFMAN) 24-204(I)
- *Army Technical Manual* (TM) 38-250
- Naval Supply Systems Command (NAVSUP) Publication 505
- *Defense Logistics Agency Instruction* (DLAI) 4145.3: "Preparing Hazardous Materials for Military Air Shipment"

The DoD or USG shipping activity preparing a HAZMAT shipment is responsible for ensuring that the shipment is properly packaged, marked, labeled, and placarded. Each shipment must be 'certified' by the origin shipping activity (e.g. a DoD/USG vendor in coordination with a DoD/USG Defense Contract Management Agency (DCMA) transportation officer, or a DoD/USG depot or storage site) using a properly executed *Shipper's Declaration for Dangerous Goods*. This declaration certifies that the item has been properly identified, classified, and packaged in compliance with the applicable

HAZMAT regulations. The declaration should include the following: item's proper shipping name, hazard class/division, compatibility group, United Nations Identification Number (UN#), packing group, point of contact information in event of emergency, and the name of the HAZMAT official who prepared the certification. The source data for these requirements can be found in the dangerous goods list located within the HAZMAT regulation used for the certification. U.S. and international HAZMAT certification is required for all FMS shipments of HAZMAT. The certification must cover movement from point of origin to final destination in the purchaser's country. This is required by the DTR and it applies whether the export is via the Defense Transportation System (DTS) or through a purchaser's freight forwarder. FMS freight forwarders, just like carriers, cannot violate the integrity of a shipment unit. If a shipper certifies an FMS shipment in accordance with 49 CFR instead of international regulations, the FMS purchaser and its freight forwarder must hire a commercial packaging service to open, repack, re-label, and recertify the shipment before it can be exported. The FMS purchaser may submit a *Supply Discrepancy Report* (SDR) to DoD to reclaim the money spent on recertification.

Class 1 Explosives

Items that fall into Class 1 are classified as high or low explosives according to rates of decomposition: low explosives burn rapidly and high explosives detonate. Properties of the explosive indicate the division into which it falls. Shipping papers, labels, and other markings include both the hazard class and division (HC/Division). "Divisions" break classes down even further. For example, a HC/Division 1.1 explosive is the most dangerous explosive because it can explode or detonate in one massive explosion. HC/Division 1.2 explosives can throw projectiles but should not detonate en masse.

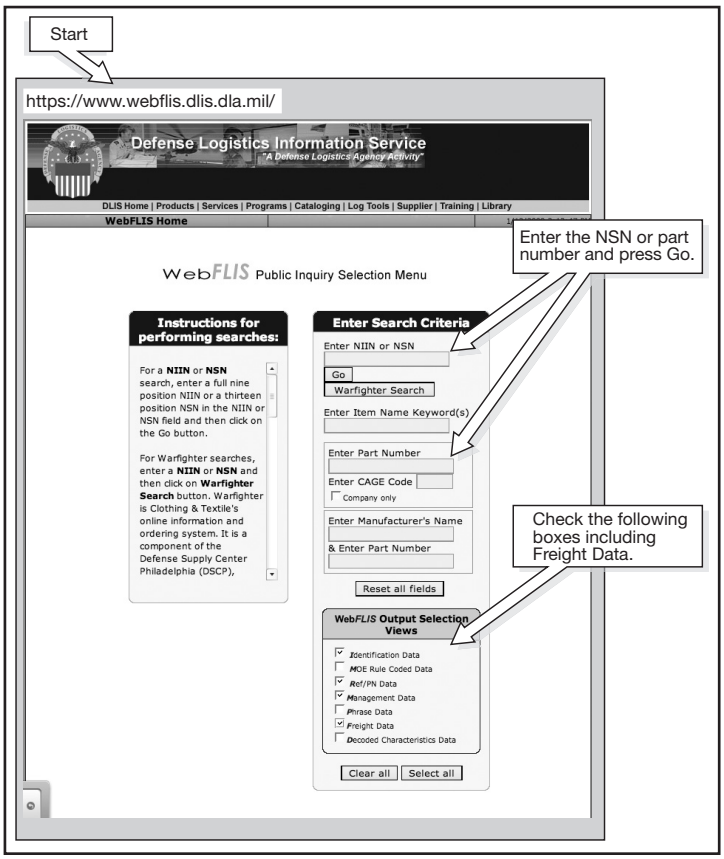
HAZMAT Class 1 Explosives

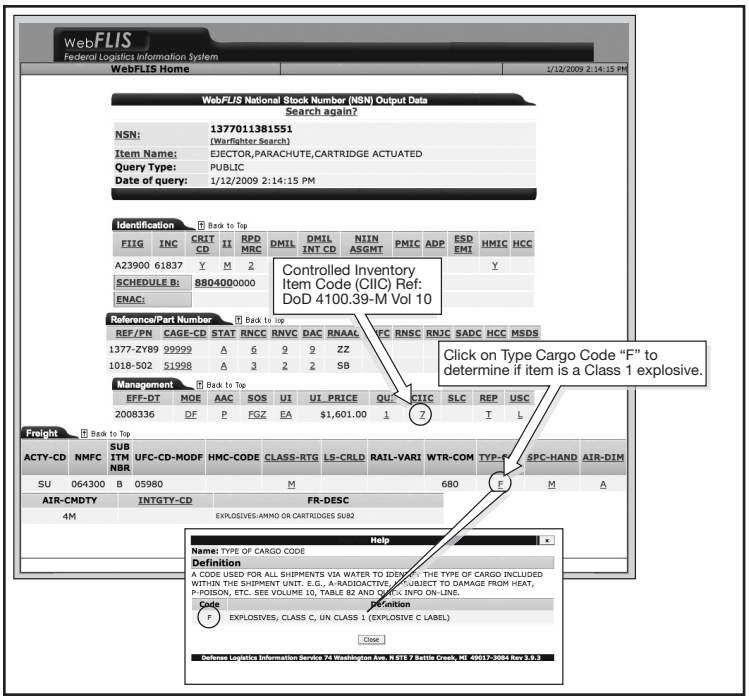
HC/Division	Definition
1.1	Mass Explosive Hazard
1.2	Non-mass explosive, fragment producing
1.3	Mass fire, minor blast or fragment hazard
1.4	Moderate fire, no blast or fragment.
1.5	Explosive substance, very insensitive
1.6	Explosive article, extremely insensitive

1. HC/Division 1.1, 1.2, 1.3 shipments to the FMS customer must move via the DTS at no less than through DoD-controlled ports of embarkation. They may not be handled by a commercial freight forwarder.

2. The only time a freight forwarder can receive Class 1 explosives is when the HC/Division is 1.4, 1.5 or 1.6 and only when the Controlled Inventory Item Code (CIIC) = 7, P, or U. (Ref: DTR, Part II, Tables 205-15 & 205-17). Examples are cartridge activated devices (CADs), HC/Division 1.4, in federal stock class (FSC) 1377. Care must also be taken to ensure the freight forwarder is capable of receiving 1.4 through 1.6 explosives due to local fire ordinances that apply.

Note: If you have access to FEDLOG, you can research the national stock number (NSN) or part number to determine if the item is a Class 1 explosive and the Controlled Inventory Item Code (CIIC).





(**Note:** if the Type Cargo Code is not displayed, then contact the Item Manager for assistance in determining the Hazard Class.)

What is Competent Authority Approval and when is it required?

Regardless of the division of explosives involved, explosive items cannot be shipped unless the owner or exporter has a CAA from the controlling CA. Because ownership of FMS shipments passes from the DoD/USG to the FMS purchaser at shipment point of origin, and control passes at some point in between (except for Delivery Term Code (DTC) 7 shipments), the procedures discussed below must be followed very carefully to ensure that the correct entity has a CAA in place.

CAAs are issued by national CAs. The CA is a national agency that has the authority to classify hazardous items and establish hazardous materials packaging and transportation regulations that apply to shipments originating in the CA's country. A CA is internationally recognized for being able to harmonize its country's HAZMAT policies and procedures with those of other countries and authoritative international HAZMAT organizations (e.g., ICAO and the IMO). When any explosive is involved, a CA must issue a CAA that certifies the following:

- The CA has reviewed the Class 1 Explosives (EX) hazard classification and packaging for a specific item
- The item meets U.N. standards
- The item is approved for transportation

The DoT (the USG's CA) has authorized the DoD to self-classify its own explosives, i.e. military explosives and in some cases other Hazard Classifications which may contain explosive properties (ref: 49 CFR 173.56b). When a Service Hazard Classifier (focal point within the DoD Material Manager Safety Office) requires a hazard classification for a new item, complete details (shipping description, division, etc.) are sent to the Department of Defense Explosive Safety Board (DDESB) for final approval. This procedure is commonly referred to as the Final Hazard Classification (FHC) process (see *DoD Joint Technical Bulletin* (TB) 700-2 (in draft) for FHC procedure details). These requests are routed through the Military Surface Deployment Distribution Command (SDDC) Safety Office. The application is then transmitted to the DoT Associate Administrator for Hazardous Materials Safety who functions within the DoT Pipeline and Hazardous Materials Safety Administration. DoT responds with a CAA that assigns an EX-Number to each submitted item. The EX-Number is constructed in a 10-digit format. For example, EX2009010032 is broken down by the following data elements:

- Positions 1-4 equal the four digit year (2009)
- Positions 5-6 equal the two digit month (01)
- Positions 7-10 equal a four digit serial number (0032)

Foreign CAs may employ an equivalent arrangement.

CAAs can also be issued as Packaging CAAs, meaning that alternate HAZMAT packaging is approved for transportation and meets U.N. standards. Packaging CAAs are required when the packaging note indicates that a Packaging CAA is required per the applicable HAZMAT regulation. Packaging CAAs are predominately used for non-DoT specification packaging, and provide additional instructions that apply specifically to the NSN/part number of the item being shipped.

In addition to the required HAZMAT certification for shipments of Class 1 items (explosives), a CAA must be on record and attached to the shipping papers. Before explosives can be shipped, the applicable CAA/EX-Number must be cited on both the Bill of Lading and CAA attached to the international shipping papers. This requirement pertains to DoD and FMS shipments.

Complete Approval Authority Impact to Foreign Military Sales

International HAZMAT rules honor CAAs issued by each participating country's authorized national CA. However, CAs will often disapprove transportation of an explosive to be transported within their territory unless they issue their own CAA for the same item. This is the case with the USG's CA. A DoD CAA/EX-Number can only be used to move an explosive item while it is still owned by DoD or still in physical custody of DoD in the DTS. Custody of Class 1 explosives purchased on FMS cases cannot be exported, imported, or moved within CONUS by the FMS purchaser or its agent (freight forwarder) until the DoT issues a CAA/EX-Number in the FMS purchaser's name. The item is no longer a U.S. DoD asset because title transfers to the FMS purchaser at the point of origin; i.e., at the loading dock of the vendor/contractor or DoD depot. Once the FMS purchaser takes physical possession of Class 1 explosives in the U.S., the DoD's CAA/EX-Number is no longer valid. If the FMS purchaser wants to ship or return Class 1 explosives via pilot or vessel pick-up from/to a U.S. port, the FMS purchaser must have a DoT-issued CAA/EX-Number in its name.

The CAA/EX-Number issued to the DoD can be used to move FMS-purchased Class 1 items (explosives) only when the DoD retains custody of the shipment (DTS). Class 1 explosives must remain in DoD custody under the following circumstances:

- Movements within CONUS (air, land, sea, and rivers)
- Export/import movements on a DoD-owned asset (Air Mobility Command aircraft or Military Sealift Command vessel)
- Export/import movements on a DoD-procured commercial ship or aircraft
- Physically located at an DoD installation OCONUS
- Physically located at the OCONUS port of debarkation (POD) prior to pickup by the purchaser (DTC 9). Once the material is offloaded at the OCONUS POD, onward inland transportation must be under the purchaser's own national CAA. If the materiel is moving through a third country, the FMS purchaser may have to obtain a CAA from the third country's CA.
- Delivery to a final inland destination in the purchaser's country (DTC 7)

For shipments of Class 1 explosives returning to the U.S. for repair or other reasons, the FMS customer must provide the country-specific CAA/EX-Number issued by the DoT, along with the CAA issued by its own national CA (see 49 CFR 173.56(f) for reference).

It is highly recommended that the FMS purchaser submit all CAA requests immediately upon acceptance of the applicable FMS Letter of Offer & Acceptance (LOA) to provide the DoT with sufficient CAA processing time (~6 months). The country-specific DoT CAA/EX-Number must be in the possession of the FMS purchaser's freight forwarder prior to the first shipment of an item against the LOA (unless 100 percent DTS is used).

The Way Ahead

The country-specific CAA/EX-Number issued by DoT is not a new requirement. Recent incidents involving FMS explosive shipments have brought increased attention to this subject. CAAs/EX-Numbers are a major part of the worldwide HAZMAT program that uses very specific packaging, labeling, documentation, and transport rules to ensure safe movement, delivery, and storage. Explosives are considered the most volatile and dangerous of all HAZMAT (except perhaps radioactive material)

and thus require special attention and procedures. Unfortunately, FMS customer countries are not being informed about CAA/EX-Number requirements and procedures.

The DoD/FMS transportation community is working to develop mandatory FMS LOA notes to inform FMS purchasers of these requirements. Additionally, there are ongoing problems that subject matter experts continue to sort out. For example, DoT's database does not currently have the ability to distinguish between a CAA issued to DoD and one issued to an FMS customer. A range of alternatives is being evaluated with solutions ranging from adding a country-specific suffix on each part number sold via FMS to assigning a new NSN or part number.

There are also questions regarding the best procedures to ensure accurate and timely processing of country-specific CAA requests. What will be the responsibilities of each party involved, the FMS customer, the case manager, AMC, SDDC, and others? DoD transportation experts, including DSCA and the MILDEPs, in conjunction with SDDC and DoT, are actively engaged in identifying problems, developing solutions, and recommending 'best practices'. Watch for 'best practices', policy memos, and updated regulatory guidance to be released as problem areas are addressed and resolved.

Frequently Asked Questions and Answers
Question: Does every foreign country have a national CA?

Answer: If a prospective FMS purchaser does not have a CA, one should be established if the FMS purchaser intends to order Class 1 explosives from the DoD (the alternative 100 percent DTS, DTC 7). IATA, ICAO, and IMDG Code contain contact information for national CAs.

Question: What steps should be taken if system component items have not received a FHC by the DoD before transferring the asset to the FMS purchaser?

Answer: Following TB 700-2, IHCs and FHCs can only be used internally by DoD for applicable items being shipped. For this reason, IHCs and FHCs would not apply to foreign items or assets entering the DTS. Therefore, it is incumbent upon DoD to have in place a DoT-issued CAA/EX-number before an item can be sold via FMS. The FMS purchaser's CA needs to issue its own CAA for any previously purchased items. Then the FMS purchaser must obtain a DoT CAA/EX-number in order to return the item(s) to the U.S. for repair, modification, or rework.

Question: Do DoT CAA/EX-numbers issued to foreign purchasers have expiration dates?

Answer: Yes. DoT CAA/EX-Numbers are typically valid for one (1) year. However, the purchaser's CA can request a CAA/EX-Number be valid for up to five years, and the DoT will normally honor this request. A 5-year window enables the NSN/part number to be returned multiple times using the same CAA/EX-Number. If the NSN or part number changes (e.g. new model), or the country alters the packaging, a new CAA/EX-number would have to be requested.

Question: As the FMS Case Manager, what can I do to help educate my FMS customer regarding Class 1 (explosive) shipping requirements?

Answer: It is the FMS Case Manager's duty to keep their foreign customers abreast of new developments on transportation and documentation requirements. FMS case managers should provide their foreign customers with adequate educational materials well in advance of a CAA request to ensure successful shipment of materiel. The first step would be to provide foreign customers with a copy of this article!

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Mr. Delmer F. Billings

Ms. Harpreet K. Singh

About the Authors

Ms. Paula J. Lockhart is an instructor at the Defense Institute of Security Assistance Management (DISAM) in the Directorate of Management Studies. She has over twenty years FMS experience, having worked as the Air Force FMS transportation lead and as an FMS case/country manager at the Air Force Security Assistance Center (AFSAC) at Wright-Patterson AFB, Ohio. Previously, she served as Chief of the Logistics Support Office, Financial Management Branch, providing transportation funding and support to Air Force weapon systems though management of the Air Force Second Destination Transportation (SDT) budget.

Mr. Joseph P. Dugan is employed by the Military Surface Deployment and Distribution Command (SDDC-SA) as an Occupational & Health Specialist. He is designated as the DoD liaison for HAZMAT safety issues and responsible for the processing of Competent Authority Approvals, Special Permits, and Special Approvals. He has currently worked in this capacity for six years. Prior to this, he worked as a DoD rail car inspector with over twenty years experience. He was HAZMAT certified at Fort Eustis, Virginia.

Mr. Orris Groenenboom has been a transportation management specialist with the U.S. Army Security Assistance Command (USASAC) in New Cumberland, Pennsylvania since October 1980. He started his U.S. Army civilian career as a supply management intern at Red River Army (now Defense Logistics Agency) Depot in Texarkana, Texas. After assignments in Germany and Rock Island, Illinois, he transitioned from supply to transportation management because it is a far more exciting career field. He served in Vietnam in a Landing Ship Tank delivering, among other things, explosives! He moved to USASAC in 1980.