

SPECIAL CARGO AND MILITARY HAZARDOUS MATERIAL BY AIR

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The main idea of this article is to characterize the distribution of hazardous materials. The article contains different categories of hazard classes, classification of military and special loads into hazard classes and documentation necessary to transport military cargo civil aviation.

Keywords: ICAO and IATA manual, military equipment, ammunition, dangerous substance, transportation

INTRODUCTION

The article elaborated the issue of transport of dangerous substances by air transport and special military equipment. In the body of the individual methods are analyzed, and the transportation of hazardous materials in accordance with ICAO and IATA manuals and also worked Classification of hazard classes and the actual classification of dangerous substances in each class. Another issue is not only the means of transportation, but also the specification of packaging and labeling of shipments containing hazardous material and various documents necessary for such transport of dangerous substances, the content of which is the identification, quantity, and relevant safety instructions necessary to ensure safety in case of emergencies. The main focus of the course of carriage from the requirements of actual implementation of specified risk material transport civil aviation, which is a military material. The paper successively appropriately considered through inclusion and categorization of military material to actual shipment and requests the necessary authorization to airlift this type of hazardous material.

1 IDENTIFICATION OF DANGEROUS GOODS AND HANDLING, DOCUMENTATION AND TRANSPORT

Hazardous materials are those types of substances or materials that their chemical or physical properties may be dangerous during air transport crew, passengers, aircraft or the environment and may pose a significant risk to health.

1.1 Definition of hazardous materials, basic rules and principles

It is very important to set strict rules for the transport of hazardous materials (used in packaging, quantity, method of transport), as provided for failure to comply with these conditions could pose a serious threat to air transport associated with disastrous consequences. Air transport is therefore monitored and regulated by the International Civil Aviation Organization ICAO

(International Civil Aviation Organization). Conditions for the transport of hazardous materials regulated by the ICAO Technical Instructions for the safe transport of hazardous materials by air - technical instruction for the safe transport of dangerous goods by air. Other organizations and groups covered by the regulations for the transport of dangerous goods include: the European Union in the EU OPS regulation (Commission Regulation (EC) No 859/2008). International Air Transport Association IATA (International Air Transport Association). Conditions for the transport of hazardous materials regulated by IATA IATA manual titled „IATA Dangerous Goods Regulation”, the abbreviation used DGR. In the Slovak Republic, the condition of the transport of dangerous goods prepared by the Ministry of Transport, Posts and Telecommunications and aviation regulations L18.

1.2 General rules on labeling and packaging of shipments of hazardous materials.

Any goods of a dangerous nature must be annotated with a warning label. Warning labels reflect the properties of the substance carried. They are mounted on the outer packaging of the consignment. In the case of radioactive material from at least two sides. Certain dangerous goods may have multiple characteristics. Consignment shall be marked with the appropriate number of warning labels informing about all the characteristics of the substance carried.

Packaging is an important and essential factor in the transport of hazardous substances. Almost all types of packaging used for the transport of dangerous goods are checked (the UN specified packaging) and must also pass the test. Tests in modern packaging facilities reduce potential risks associated with damage to the packaging during carriage by air, thus contributing to a significant improvement of transport and eliminate leakage of the substance carried. Exemplary methods of testing packages: test pressure changes, vibration test, test free drop test temperature change, tightness test, test downloading.

1.3 Documentation

Any dangerous goods being transported must be duly completed documentation - a special

form, which informs the master hazard goods. The form contains the waybill number, the correct name of transported, the quantity of goods or volume. The radioactive goods transport index must be a number of categories.

Consignor or designated representative signature confirms that the consignment is legally determined, packed, marked the limits are respected, and that the content is caused by shipment for air transport in accordance with the relevant regulations. This form is the most important information of the dangerous cargo.

Types of documentation: Notification to Captain - NOTOC, AWB - the bill of lading, cargo manifest, LDM - Load Message, CPM - Container Pallet Message, LI - Loading Instruction.

2 THE CLASSIFICATION OF DANGEROUS SUBSTANCE

Hazardous substances are divided into several classes / divisions under the state, in which they are transported, toxicity and radioactivity.

2.1 The hazard classes

Class 1 Explosives, Class 2 Gases, Class 3 flammable liquid, Class 4 Solid combustibles, Class 5 Oxidizing substances and Organic peroxides, Class 6 Toxic substances and Infectious substances Class 7 Radioactive material, Class 8 Corrosive Class 9 dangerous goods Miscellaneous.



Pic.1 - warning labels for class of explosives

3 CHARACTERISTIC AND TRANSPORTATION OF MILITARY BY CIVIL AVIATION

Each component of military equipment and military material is considered and classified as a hazardous material, whether it is transported by air, by sea, rail or road.

3.1 Classification of Military

Almost all war material can be classified in Class 1 classification of dangerous substances „Explosives „. Exceptions are upgraded kinds of weapons and munitions of war, we can advise to the classes of dangerous substances 4 Fixed - flammable nitrocellulose , ignition systems and the like ,6 Toxic and infectious substances and biological weapons and the like ,7 Radioactive material - nukes

However, the most frequently occurring material can be considered military weapons and ammunition itself, which is, as mentioned earlier, categorized in Class 1 explosive hazardous substances.

Military division into 3 divisions:

- 1 Substances presenting a mass explosion hazard (dynamite, TNT, large caliber ammunition, etc.).
- 2 Substances with hazard traits, but not constituting a mass explosion hazard (a hand grenade, frag grenade, Flash bang grenade, etc.).
- 3 Substances and articles which present no significant hazard during transport (ammunition for small arms and soft pyrotechnics)

3.2 Labeling and Packaging Military

Every military goods transported by air transport shall meet the safety criteria for packaging and labeling shipments. Military equipment as well as other hazardous substances must be stored in specific containers that meet the required criteria of the pack. Military consignment must be marked with warning labels representing the nature of the substance carried and the material. It also must include labels for ground handling, which reflect the way of handling and storage of the consignment.

All these directives, rules and regulations are equally valid and equally necessary for the transportation of hazardous materials by air. So, where is the difference?

Differences in the transport of military material civil aviation are:

- 1 Military equipment is prohibited civil aviation transport!
- 2 For shipments of military equipment, civil air transport is necessary written notification of the Ministry of Defense.
- 3 On the basis of the authority of the Ministry of Transport, Posts and Telecommunications and the decision on the authorization of the Office of Standards, Metrology and Testing, Decision on the classification of explosive substance or article to the appropriate hazard class for transport under UN Recommendations on the Transport of Dangerous Goods and the Manual of Tests and Criteria military Technical and Testing Institute.
- 4 Prior acceptances by the Directorate for prevention of fires and explosions, issued on the basis of the safety evaluations conducted in accordance with UN recommendations on the transport of dangerous goods - Tests and Criteria. Approving the classification and group classification, assigns the corresponding name for the transportation of certain explosives and products.
- 5 Permission to UN code marking competent Technical Testing Institute

3.3 The exemption for dangerous goods

In case of extreme urgency or where other kinds of transport are inappropriate and full compliance with the relevant guidelines and regulations is contrary to the public interest, the Ministry of Transport, Posts and Telecommunications to grant exemption from the provisions of aviation regulations "L 18 - Transport of dangerous goods" and Doc. 9284 - Technical Instructions for the Safe Transport of Dangerous Goods by Air provided that the carrier will ensure a standard level of safety in the transport of dangerous goods, which corresponds to the level of security required by these regulations.

Ministry exempts from ICAO Annex 18 on the basis of Article 3 of Ministerial Order No. 25/2008 issuing the P-18. The Ministry may grant an exception to the rule only to the assent of expert opinion Aviation Authority of the Slovak Republic, stating any additional requirements to ensure the required level of safety in the transport of dangerous goods.

The Ministry has issued guidelines SCLVD no. 9/2010, which establishes the procedure for granting exemptions from ICAO Annex 18 and ICAO Doc. 9284 - Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Documentation necessary for exemption:

- 1 Basic data for exemption (in Slovak and English)
- 2 Shipper's Declaration for Dangerous Goods (in English)
- 3 Resolution of the National Council of the Slovak Republic
- 4 Decision on the classification of explosive substance or article to the appropriate hazard class carriage
- 5 Interim Competent Authority Approval issued by Directorate for Fire and Explosion Prevention of Norway (in English and Slovak)
- 6 Competent Authority Approval issued by Directorate for Civil Protection and Emergency Planning of Norway (in English and Slovak)
- 7 Permission labeling UN code issued by Technical Testing Institute Piešťany
- 8 Certificate of Packaging / Dangerous Goods issued by Norwegian Directorate for Fire and Explosion Prevention (in English and Slovak)

3.4 Additional documentation for the transport civil aviation

When transporting military material required additional documentation concerning the technical parameters of the aircraft.

The supplemental documentation components include:

- Air operator's certificate
- Certificate of Airworthiness
- Certificates for aircraft noise
- The insurance certificate of aircraft

- Certificate of registration of aircraft

4 SECURITY PROCEDURES FOR ACCIDENTS INVOLVING HAZARDOUS MATERIALS

Despite safety compliance, compliance with ICAO and IATA guidelines for packaging of hazardous materials, getting to unwanted accident or emergency situation that may endanger the safety of crew, transported goods itself, or even the population on earth.

4.1 General instructions for immediate action in the incident

- prevent entry of other persons
- call firefighters
- define the scope of the incident
- avoid possible reactions with surrounding shipments
- limit the handling of damaged item
- use available protective equipment
- prevent fire
- not touch the substance
- drink, eat or smoke
- Do not breathe fumes
- get medical assistance if contact with a hazardous substance
- disgusting smells
- avoid hand contact, mouth, eyes and nose
- need to contact the consignor or consignee and require a safety data sheet for shipment

CONCLUSION

Transport of dangerous goods by air nowadays is meeting all safety procedures according to ICAO and IATA manuals safer than in previous times. When transporting military cargo which is classified in Classes 1.2 and 1.4 hazard classes carrier must observe all safety precautions and regulations in accordance with specified manuals. When transporting civil aviation is banned this type of cargo transported. There are exceptions to this permit to carry the load, but you need to submit several dozen documents, permits, and requests that such shipments could take place.

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