



GOVERNMENT OF INDIA

**OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION**

TECHNICAL CENTRE, OPPOSITE SAFDARJUNG AIRPORT, NEW DELHI

**CIVIL AVIATION REQUIREMENT**

**SECTION 11 – SAFE TRANSPORT OF DANGEROUS GOODS**

**SERIES 'C' PART I**

**ISSUE III IV, \_\_\_\_\_ November 2022**

**EFFECTIVE: FORTHWITH**

**SUBJECT: Approval of Dangerous Goods Regulations Training Programme.**

**1. INTRODUCTION**

- 1.1 Dangerous goods are articles or substances which are capable of posing a hazard to health, safety, property or the environment. In order to ensure safe transport of dangerous goods by air. ICAO has laid down the standards in Annex 18 which provides that each contracting State shall take the necessary measures to achieve compliance with the detailed provisions contained in the Technical Instructions, and has also issued the Technical Instructions for the Safe Transport of Dangerous Goods by Air. For giving effect to these provisions in India, the Aircraft (Carriage of Dangerous Goods) Rules, 2003, have been promulgated.
- 1.2 The successful application of the provisions pertaining to safe transport of dangerous goods by air are greatly dependent on the appreciation by all individuals concerned of the risks involved and on a detailed understanding of these provisions. This can only be achieved by properly planned and maintained initial and recurrent training programmes for all persons concerned in the transport of dangerous goods.
- 1.3 ICAO Technical Instructions provide that all operators regardless of whether or not they are approved to transport dangerous goods as cargo and the employer of personnel that perform functions aimed at ensuring that dangerous goods are transported in accordance with the Technical Instructions must establish and maintain a dangerous goods training programme. The training courses may be developed and delivered by or for the employer.
- 1.4 Rule 12 of the Aircraft (Carriage of Dangerous Goods) Rules, 2003, provides that no person shall engage himself in any manner in the transport of dangerous goods unless he has undergone proper training commensurate with his responsibilities. For this purpose, initial and recurrent dangerous goods training programmes are required to be established and maintained by all operators, and the employer involved in the transport of dangerous goods by air. The dangerous goods training programmes established and maintained by or on behalf of Indian operators as also those established and maintained in India by

other agencies shall be subjected to review and approval by the D.G.C.A.

- 1.5 This Civil Aviation Requirement (CAR) lays down the requirements and procedure for grant of approval to the dangerous goods training programmes.
- 1.6 This CAR is issued under rule 13 of the Aircraft (Carriage of Dangerous Goods) Rules, 2003.

## **2. OBJECTIVES OF TRAINING**

- 2.1 The primary objective of dangerous goods training is safety. A trained person would be in a better position to recognise the hazards presented by the Dangerous Goods and to appreciate the risks involved in the carriage of dangerous goods by air and deal with them in accordance with the laid down processes and procedures. This can be achieved by ensuring availability of competent workforce through establishment of training and assessment based on following principles:
  - i) Relevant competencies are clearly defined for a particular role;
  - ii) There is an explicit link between competencies and training, required performance on the job and assessment;
  - iii) Competencies are formulated a way that ensures they can be trained for, observed and assessed consistently in a wide variety of work contexts for a given role;
  - iv) Trainees successfully demonstrate competency by meeting the associated competency standards;
  - v) Each stakeholder in the process including the employer (e.g. shipper, freight forwarder, ground handling agency and operator) instructor, trainee, training organization and regulator has a common understanding of the competency standards;
  - vi) Clear performance criteria are established for assessing competence;
  - vii) Evidence of competent performance is valid and reliable;
  - viii) Instructors' and assessors judgments are calibrated to achieve a high degree of inter-rater reliability;
  - ix) Assessment of competencies is based on multiple observations, across multiple contexts and
  - x) To be considered competent an individual demonstrates an integrated performance of all the required competencies to a specified standard.

## **3. REQUIREMENTS FOR TRAINING**

The personnel responsible to perform the functions related to carriage of dangerous Goods

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by air are required to have relevant competency to perform the assigned tasks and such personnel are required to be trained and assessed in dangerous goods regulations to discharge their responsibility. The aspects of the training and assessment for personnel may vary depending upon the requirements associated with the function of the person trained. However, the operator or employer shall ensure that no personnel shall be engaged in any manner in the transport of Dangerous Goods unless he has undergone proper training in the requirements commensurate with their responsibilities. The dangerous goods training for all such personnel shall include the following: -

- (a) **general awareness/familiarization training** — Personnel must be trained to be familiar with the general provisions;
- b) **function-specific training** — Personnel must be trained to perform competently any function for which they are responsible;
- c) **safety training** — Personnel must be trained on how to recognize the hazards presented by dangerous goods, on the safe handling of dangerous goods, and on emergency response procedures: and
- d) Organizational policies and procedures – Personnel must be familiar with the organisation's policies and procedures related to dangerous goods, including reporting procedures of dangerous goods occurrences, incidents and accidents.

3.1 An operator depending upon its size, may have several training programmes customized to the individual responsibilities and assigned functions of its staff.

3.2 Even if the operator does not carry dangerous goods as cargo, there is still a need for dangerous goods training for both operational and ground staff dealing with cargo, passengers and their baggage

3.4 Training shall be provided or verified upon employment of personnel identified in the Technical Instructions and the operator / employer must ensure that personnel are competent to perform the functions for which they are responsible.

3.5 No person shall be assigned to new function unless he has undergone appropriate training and assessment to determine his competency in respect of the function assigned.

3.6 Recurrent training and assessment shall take place within 24 months of the previous training and assessment to ensure that competency is maintained. However, if recurrent training and assessment is completed within the final three months of validity of previous training and assessment, the period of validity shall extend from the date on which the recurrent training and assessment was completed until 24 months from the expiry date of that previous training and assessment.

#### **4. APPLICATION FOR APPROVAL**

4.1 An application for grant of approval for establishment of a Dangerous Goods Training Programme shall be made to the DGCA (Directorate of Regulations & Information-Dangerous Goods Division).

4.2 The application shall be accompanied by the Dangerous Goods Training Manual and shall include, in addition to any other relevant information, the following details:-

- (i) Name of the training organization (operator / employer / other agency);
- (ii) Functions /categories of personnel to be trained;
- (iii) Particulars of the Training facilities and training aids ;
- (iv) Particulars of arrangements for assessment and assessment tools;
- (v) Description of the training and assessment materials to be used to meet the training and assessment requirements;
- (vi) Names, qualifications and experience of the training designer, Chief Instructor , Instructors and assessors;
- (vii) Maximum number of participants to be enrolled in a class;
- (viii) The frequency at which the course is likely to be conducted; and
- (ix) Details of organization capability and resources including support staff for establishing and maintaining the Dangerous Goods Training Programme

4.3 The application shall be liable to be rejected if the deficiencies observed in the application and Dangerous Goods Training Manual are not rectified by the applicant for a period of one month.

#### **5 DANGEROUS GOODS TRAINING MANUAL**

5.1 The Dangerous Goods Training Manual shall, in addition to any other relevant information, contain the following chapters, namely:-

- (i) Introduction
- (ii) Indian legal regime on carriage of dangerous goods by air
- (iii) Purpose and objectives of the training
- (iv) Design Methodology- Training need analysis
- (v) Qualifications and experience of the instructors and Assessors
- (vi) Functions /categories of personnel to be trained
- (vii) Course Objectives

- (viii) Course Structure/Methodology
- (ix) Course Contents and tasks
- (x) Course Schedule
- (xi) Lesson Plan
- (xii) Exercises/assignments
- (xiii) Practical Exercises
- (xiv) Model Examination Papers
- (xv) Competency Assessment plan, methods & tools
- (xvi) Course Evaluation
- (xvii) Specimen Certificate
- (xviii) Maintenance of Training and Assessment Records
- (xix) System for supervision of training standards and its compliances with the regulations.

5.2 The terms to be used in the Manual shall be in line with those defined in the Technical Instructions and the Aircraft (Carriage of Dangerous Goods) Rules, 2003.

5.3 A system shall be developed to review and revise the Manual so as to incorporate the amendments, as and when issued, to the provisions of Annex 18 to the Chicago Convention, the Technical Instructions (Doc. 9284 AN/905), the Aircraft (Carriage of Dangerous Goods) Rules, 2003, and any other related document. A copy of the Manual so revised shall be submitted to the DGCA immediately for concurrence/approval.

## **6 DANGEROUS GOODS INSTRUCTORS AND ASSESSORS**

6.1 For the establishment and maintenance of a Dangerous Goods Training Programme, there shall be a Chief Instructor, at least one qualified Instructor and adequate number of qualified assessor (s) as per Competency Assessment plan.

6.2 The Chief Instructor shall meet the following criteria:

**(a) Age:** The age of the Chief Instructor shall not be more than 65 years.

**(b) Qualification:** At least a graduate degree preferably with Physics and Chemistry at 10+2 level.

**(c) Experience:** He shall have a minimum 15 years of experience in civil aviation out of which 5 years' experience as DGR instructor OR at least 10 years' experience as DGR instructor in preceding 15 years.

6.3 The Dangerous Goods Instructor shall meet the following criteria:

**(a) Age:** The age of the Instructor shall not be more than 65 years.

**(b) Qualification:**

- (i) At least a graduate degree preferably with Physics and Chemistry at 10+2 level.
- (ii) Successful completion of DGR instructor course.
- (iii) Successful completion of DG training for all function(s) or Category 6 which shall be valid for at least six months from the date of application for approval.

**(c) Experience :** (i) A minimum 5 years experience in transportation of dangerous goods by air.

(ii) It is desirable to have significant and well-rounded civil aviation experience in ground handling operations including passenger and baggage handling, cargo operations, and ramp operations

6.4 The Dangerous Goods Assessor shall meet the following criteria:

**(a) Age:** The age of the Assessor shall preferably be not more than 65 years.

**(b) Qualification:**

Successful completion of DG training for all function(s) or category-6 which shall be valid for at least six months from the date of application for approval.

**(c) Experience :** (i) A minimum of 10 years of experience in the relevant job function OR (ii) A minimum of 10 years of experience as a DGR Instructor in the relevant function / categories.

6.5 Since the instructors and assessors form an important part of the Dangerous Goods Training Programmes, approval of DGCA shall be obtained before inducting any new instructor or assessor as per para 6.3 and 6.4.

6.6 The Dangerous Goods Instructor / Chief Instructor / Assessors shall be approved after assessment by a committee comprising of Joint Director General, Chief Dangerous Goods Inspector, and Senior Dangerous Goods Inspector. The assessment shall be based on the qualifications, experience, and competency of the candidate.

6.7 A new instructor or assessor shall conduct at least two courses assessments under the supervision and guidance of an already approved Chief instructor or assessor, as the case may be.

6.8 A dangerous goods instructor shall conduct at least two courses of the function / category for which he is approved within a period of six months. In case of a longer gap, he shall be required to undergo a recurrent course in applicable function(s) /Category.

6.9 A dangerous goods assessors shall do at least 05 assessments per month and at least fifty assessment in six months. In case of less assessments, he shall be required to undergo a recurrent course in applicable function(s).

6.10 All the Dangerous Goods Instructors and Assessors shall report to the Chief Instructor.

## 7. GRANT OF APPROVAL

- 7.1 Based on the satisfactory review of application and the Dangerous Goods Training Manual, an inspection shall be carried out by an officer, who is authorised to do inspection under rule 10A of the Aircraft (Carriage of Dangerous Goods) Rules, 2003 to verify whether the training organisation is fully equipped and has competency to provide the training in accordance with the requirements specified in this CAR.
- 7.2 Upon being satisfied that the training organisation has the capability and competence to conduct the training in a proper and efficient manner in accordance with the provisions of this CAR, the Director-General or any other officer authorised in this behalf may grant approval to the Dangerous Goods Training Programme.
- 7.3 The validity of the approval shall be for a period not exceeding one year, where after it may be renewed subject to continued compliance with the laid down requirements/conditions.
- 7.4 At any time, if the training organisation is not in a position to comply with the requirements stipulated in this CAR or the conditions of approval, it shall intimate DGCA about it and suspend the training forthwith. During this period, the training organisation shall take appropriate remedial action under intimation to DGCA who may restore the approval if the action taken is found to be satisfactory.

## 8 DURATION OF TRAINING COURSES

8.1. Depending upon the scope and complexity of the topics/tasks/Sub tasks to be covered, the duration of the training course(s) shall be so fixed as to achieve the objectives of the course. Each training course shall comprise of mandatory topics and function specific topics / tasks / sub-tasks

8.2 The Minimum duration for topics/tasks / sub-tasks of the training course(s) are given below:

### A) Mandatory topics:

S. NO.	DANGEROUS GOODS KNOWLEDGE	Minimum Duration for Initial Training	Minimum Duration for Recurrent Training
1	Indian Legal Regime and applicable regulations	1:00 hours	00:30 min
2	General Awareness/Familiarisation of the provisions related to Dangerous Goods	2:00 hours	1:00 hours
3	Recognize the hazards presented by dangerous goods and Collection of safety data and Reporting	1:00 Hour	00:30 min
4	Company policy and procedures	00:30 min	00:30 min

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<b>S. NO.</b>	<b>DANGEROUS GOODS KNOWLEDGE</b>	<b>Minimum Duration for Initial Training</b>	<b>Minimum Duration for Recurrent Training</b>
5	Practical Exercise	01:00 hours per participant	01:00 hour per participant

**B. Function specific topics/tasks/sub tasks**

**(i) For Various categories of personnel:**

<b>Categories</b>	<b>Duration</b>
(a) (i) Shippers and persons undertaking the responsibilities of shippers (Category 1). (ii) Staff of freight forwarders involved in processing dangerous goods (Category 3). (iii) Operator's and ground handling agent's staff accepting dangerous goods (Category 6).	36 hours for Initial Training and 18 hours for Recurrent Training.
(b) (i) Packers (Category 2). (ii) Staff of freight forwarders involved in processing cargo, mail or stores (other than dangerous goods) (Category 4). (iii) Staff of freight forwarders involved in the handling, storage and loading of cargo, mail or stores (Category 5) (iv) Operator's and ground handling agent's staff accepting cargo, mail or stores (other than dangerous goods) (Category 7). (v) Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo, mail or stores and baggage (Category 8).	12 hours for Initial Training and 6 hours for Recurrent Training.
(c) (i) Passenger-handling staff (Category 9). (ii) Flight crew members and load planners (Category 10). (iii) Crew Members (other than flight crew members) (Category 11). (iv) Security staff who are involved with the screening of passengers and their baggage and cargo, mail and stores (Category 12).	4 hours for Initial Training as well as for Recurrent Training.

**Note:** (a) The provisions of para 8.2 B (i) shall be applicable till 31.12.2022 and the existing approved Training organizations shall revise their DGTM as per para 8.2 B(ii) of this

CAR and submit for review and approval of DGCA prior to 28.02.2023.

(b) The training organizations who submit their revised DGTM in accordance with Note (a) above may impart Trainings as per their approved DGTM till the approval of their revised DGTM under para 8.2 B(ii) or 30.06.2023 , whichever is earlier.

**ii) The duration of the topics under Tasks/sub tasks/sub sub-tasks for the function(s) under Competency Based Training and Assessment approach shall be specified in the Dangerous Goods Training Manual for review and approval of DGCA.**

**Note: For syllabi of function specific topics, the training organization may refer matrix tool given in ICAO Technical Instructions and ICAO Guidelines for Competency-based Approach to Dangerous Goods Training and Assessment (Doc 10147) as amended.**

8.3 A detailed course schedule indicating the period to be devoted for each topic included in the course contents of the said function shall be prepared and included in the Dangerous Goods Training Manual.

## **9. DUTIES OF CHIEF INSTRUCTOR**

9.1 The Chief Instructor shall be responsible to DGCA for the efficient conduct of training in accordance with the scope of training and also for ensuring that standard of training is maintained and the terms and conditions of approval are observed.

9.2 In order to achieve this objective, the Chief Instructor shall ensure that:

- a) appropriately qualified instructors and assessors are available in adequate number.
- b) the training aids and assessment tools are available at all times during training and are maintained in a proper and serviceable condition.
- c) each participant is provided relevant training material such as a copy of the current edition of the ICAO Technical Instructions / IATA Dangerous Goods Regulations, the Aircraft (Carriage of Dangerous Goods) Rules, 2003, Emergency Response Guide (Doc-9284), Company Policy /Manual, the Civil Aviation Requirements and any other directions issued by DGCA on the carriage of dangerous goods by air.
- d) high standard of instruction, examination, and assessment is maintained.
- e) the trainee's progression towards the achievement of competencies and ensure continuous improvement by collecting information about the effectiveness of the training materials through utilisation of Data from different sources.

9.3 The Chief Instructor shall obtain approval of DGCA before inducting any new instructor or assessor.

9.4 The Chief Instructor shall exercise Administrative Control over all the Dangerous goods instructors and assessors.

9.5 The Chief Instructor shall be responsible for setting up the question papers, conducting the examination, checking/marking of answer sheets, making requisite arrangements for assessment and issuance of certificates to the successful participants. He shall maintain a liaison with DGCA in this regard.

9.6 He shall be responsible for systematic maintenance of the training records as required by paragraph 13 of this CAR.

9.7 The Chief Instructor shall also ensure that proper and adequate facilities are provided to the authorised officers of DGCA for inspection of the Dangerous Goods Training Programme.

## **10. STANDARD OF TRAINING**

10.1 The minimum educational qualification of the participants for the dangerous goods regulations training commensurate with the function shall be specified in the Dangerous Goods Training Manual of the organisation for review and approval of DGCA.

10.2 The class room shall be fully equipped with modern equipments such as with relevant training aids including audio and video devices, Projector, training films, specimens, posters, labels as mentioned in the Dangerous Goods Training Manual and the class room environment as demonstrated during inspection/audit, shall be maintained at all times.

10.2 Adequate resources and facility for the assessment and practical exercises of the Training.

10.3 Every participant shall be provided a copy of the ICAO Technical Instructions / IATA Dangerous Goods Regulations Manual, study material and other training material such as Emergency Response Guidance, handouts etc. for reference during the course.

10.4 Adequate number of films on dangerous goods including on incidents/accidents shall be procured and the relevant portions shall be shown to the participants during the course for clear understanding of the concepts.

10.5 Whenever any training course is planned, an intimation shall be sent to DGCA so as to reach him at least fifteen days prior to the commencement of the course.

10.6 In order to enable the instructor to give personal attention to all the participants, the ideal size of a dangerous goods course should be 10 to 15 participants. However, the maximum number of students shall not exceed 20 in any case.

10.7 In order to ensure the efficiency of the instructor, the instruction time shall not exceed 30 hours in any week and 6 hours in a day. These limitations shall not apply for the examination /Practical exercises/assessment/ breaks.

10.8 The participants for recurrent training shall not be mixed with those for the initial

training.

10.9 Objectives shall be clearly stated at the start of each course and sufficient exercises shall be included in the course to demonstrate achievement of these objectives.

10.10 The syllabus for each function or category of personnel shall include adequate coverage of the Indian legal regime on carriage of dangerous goods by air

10.11 A minimum of 50 persons for each function(s)/category shall be trained by a training organisation every year.

10.12 During the conduct of the training, the Dangerous Goods Training Manual shall be followed in letter and spirit. However, any direction from the DGCA in regard to the conduct of the course shall be complied with.

## **11 EXAMINATION, ASSESSMENT AND CERTIFICATION**

11.1 At the end of a training course, each participant shall be required to successfully pass a comprehensive written examination and skill assessment to test his-competency for the function.

11.2 A participant shall have 100% attendance before he is allowed to appear in the examination and assessment.

11.3 The examination shall be so designed as to enable the participant to demonstrate an understanding of all the topics covered. The difficulty level of the questions shall be such that the examination tests the ability of the participant to perform his job functions in compliance with the provisions of the Aircraft (Carriage of Dangerous Goods) Rule, 2003 and the Technical Instructions.

11.4 A participant shall be required to secure 80% marks to pass the examination.

11.5 A participant after having passed the examination shall be assessed to demonstrate all competencies of the job functions.

11.6 The participants who successfully complete the course (Examination & Assessment) shall be issued a certificate to this effect.

11.7 Those who fail to secure 80% marks in the examination may be allowed to reappear in the test for the next batch within a period of three months of the training.

11.8 Those who fail to demonstrate all competencies of the job function may be allowed to reappear for assessment after adequate training.

11.9 A report on the conduct of the training course indicating the marks obtained and level of proficiency achieved by each participant shall be submitted to the DGCA within seven days of the date of completion of assessment.

## **12. RENEWAL OF THE APPROVAL**

12.1 A request for renewal of the approval of the Dangerous Goods Training Programme shall be made to DGCA at least 30 days prior to expiry of the approval.

12.2 An internal audit report confirming that the operator/ training organisation maintains the required capability and standard as given in para 4.2 and para 10 of the CAR and meets the requirements of this CAR shall also be submitted along with the request for approval.

12.2 On receipt of the request, an audit of the training organisation shall be carried out by an officer of the DGCA authorised in this behalf. On being satisfied that the training is being conducted in a proper and efficient manner and the requirements specified in this CAR as well as the conditions of approval are being complied with, the approval may be renewed for a period not exceeding one year.

### **13. Maintenance of Training records**

13.1 The following records shall be preserved for a minimum period of three years from the date of the completion of the most recent training:-

- (i) a copy of the registration form duly filled in by the participants;
- (ii) a description or reference of the training materials used to meet the training requirements;
- (iii) Task list and proficiency level that were assessed;
- (iv) a copy of the Question paper / Answer sheet and record of assessment of each participant;
- (v) a copy of the course evaluation form completed by the participants; and
- (vi) a copy of the certificates issued to the successful participants.

13.2 The following records shall be maintained for a minimum period of five years from the date of completion of the most recent training:-

- (i) the name of the participant;
- (ii) The name of instructor and assessor;
- (iii) Training provider name and address;
- (iv) the function/ category in which training conducted, indicating whether initial or recurrent;
- (v) the commencement and conclusion dates of the course; and
- (vi) the result of the examination and assessment conducted at the end of the course.

13.3 The records shall be made available upon request to an authorised officer of the DGCA for inspection.

**Director General of Civil Aviation**