



# **Syllabus for Dangerous Goods Safety Adviser**

## **Examinations**

**Version 2.0 — February 2022**

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# Introduction

This document contains the syllabus for the subjects of the Dangerous Goods Safety Adviser (DGSA) examinations and associated assessment information.

## Purpose and aim of Dangerous Goods Safety Adviser (DGSA) examinations

The purpose of the DGSA examinations is to ascertain whether you possess the level of knowledge required to carry out the duties and functions of a DGSA, as described in 1.8.3.3 of the ADR Agreement (road), RID Regulations (rail) and ADN Agreement (inland waterways).

The aim is to obtain a certificate providing the legal authority to practise as a DGSA.

To qualify as a DGSA in the UK, you must pass three written examination papers.

You must pass both the **Core** and **All Classes** papers, and at least one of the Mode papers: **Road, Rail** or **Inland Waterways**.

There are more details of these papers in the **Assessment structure** section of this document.

The DGSA examinations will enable you to demonstrate your ability to:

- ◆ navigate the transport regulations to locate specific safety duties and requirements
- ◆ interpret the legislation to determine the scope and/or relevance of provisions
- ◆ evaluate the impact of the regulations and understand their practical application
- ◆ provide accurate advice and guidance on dangerous goods transport
- ◆ deliver support to facilitate the safe transport of dangerous goods in compliance with the regulations

If you are successful in the qualifying examinations, you will gain a certificate authorising you to practise as a DGSA for a period of five years.

## Skills, knowledge and understanding

The following skills, knowledge and understanding will be assessed in the DGSA examinations.

You will be expected to demonstrate your ability to:

- ◆ Understand the general principles of UK national and relevant international regulations governing the carriage of dangerous goods given in the:

- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
  - Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)
  - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)
  - The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) (CDG)
  - other permitted examination texts
- ◆ Navigate, interpret and apply the regulatory requirements.
  - ◆ Understand the role, functions and responsibilities of the DGSA and other participants within the transport chain.
  - ◆ Read and respond to questions in writing, which will include:
    - selecting information from the relevant sections of the regulatory texts
    - presenting information accurately and ensuring all elements of each question are answered
    - drawing valid conclusions, based on the details given in the question and information extracted from the regulatory texts
    - providing descriptions and explanations on how you reached your conclusion, where relevant
  - ◆ Provide accurate references to support your response.

The following broader cognitive skills will also be assessed:

- ◆ describing
- ◆ identifying/stating
- ◆ selecting
- ◆ explaining (reasons/meanings)
- ◆ locating

## Who is this assessment for?

The DGSA examinations are suitable for individuals that work or are preparing to work as a DGSA, for example:

- ◆ consignors
- ◆ carriers
- ◆ consignees
- ◆ other participants as defined by ADR/RID/ADN/CDG
- ◆ transport operators
- ◆ site managers
- ◆ senior managers
- ◆ warehouse supervisors/managers
- ◆ trainers
- ◆ consultants
- ◆ regulators

Note: the above list is not exhaustive.

There are no qualifications or minimum level of experience required before enrolling for DGSA examinations. However, during the examinations you will be required to extract key information from scenario-based questions, and respond appropriately, so it is recommended that you possess oral/verbal and written communication and literacy skills at SCQF level 6/QCF level 3 or equivalent.

On qualification, you will be required to monitor activities and compile written reports, which will require a firm grasp of oral/verbal and written communication skills in employment.

Training will help you prepare for these exams.

The examinations will allow you to demonstrate that you meet the minimum criteria to practise as a DGSA, with the expectation that on certification you will continue to develop your knowledge and competence through relevant professional development.

## Assessment structure

To qualify as a DGSA, you must take and pass three subjects as follows:

**Core** — compulsory for all candidates (pass mark 32)

**All Classes** — compulsory for all candidates (pass mark 32)

and a minimum of **one Mode paper** — **Road, Rail and/or Inland Waterways** (pass mark 32)

The examinations take place on the same day, the Core paper at 09.30–10.45, the All Classes paper at 11.15–13.00, the mode papers of Road or Rail or Inland Waterways at 14.00–15.45.

Subjects can be sat independently across different examination diets, or multiple subjects can be sat on the same day. Single subject passes can be held until you gain three passes. However, you must pass all three subject papers within a 12-month period. The examinations are open book, which means that you are allowed to take certain texts into the examination room. A list of permitted materials can be found on the website, <https://www.dgsafetyadvisers.org.uk/DGSA>, and will be sent to you in the exam joining instructions.

You can obtain information about enrolling for examinations by contacting SQA's Contract Services team on 0345 270 0123.

On passing the examinations you will be certificated, which will enable you to practise as a DGSA for five years from the point of certification. To continue practising as a DGSA you must maintain your certification at five-yearly intervals.

To prevent a gap in certification, which would result in your being ineligible to practise, it is recommended that you come forward at the beginning of year 4 to sit the required examinations.

## Format of syllabus

The syllabus is presented in subjects, Core, All Classes, Road, Rail and Inland Waterway. The topics that will be sampled within the DGSA examinations are shown in groups.

Each topic is presented as a general statement, followed by an expansion of the area on which you may be examined. Alongside each heading are indicative references to the parts of RID/ADR/ADN/CDG Regulations that may form the basis of questions on that section.

For example, the topic 'Documentation requirements' appears in the second group of the Core syllabus as Topic 5 and in the first group of the Road syllabus as Topic 3.

- ◆ In the Core syllabus, you are expected to understand the requirements of the various regulations.
- ◆ In the Road syllabus you are expected to have a comprehensive knowledge of the documentation requirements of ADR and the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations, and to be able to interpret these regulations and complete transport documentation for road journeys.

Two different levels of understanding are being examined by the various subjects.

The first is knowledge and understanding of the principal areas of a topic. For example, in Topic 3 of Core you are expected to be aware of the commonly available options for packing dangerous goods (packagings and tanks) and understand the basic principles of approval and certification.

The second level is an understanding of a topic and the ability to apply that understanding. For example, in Topic 2 of All Classes, you are expected to understand class-specific provisions and to be able to select a suitable packaging or tank from the appropriate regulations for a particular substance or article. Alternatively, in Topic 2 of Rail you are expected to understand the marking, labelling and placarding requirements of the applicable regulations and the influence of other modal regulations.

## What you may be asked

The examinations for Rail and Road will be primarily based, respectively, on the provisions of the current RID Regulations and ADR Agreement plus The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG2009) (as amended).

You must understand the layout, structure and contents of RID or the ADR Agreement. You must be able to refer to RID or ADR to define the legal requirements for compliance.

You must understand the requirements of the regulations as they apply to the loading, unloading and transport of dangerous goods.

The CDG regulations require industry to follow RID or ADR unless specific variations (including transitional arrangements) are shown in the regulations. Questions may therefore be set on the CDG regulations and in particular:

Regulation:

2 and 3	Interpretation — especially those words and expressions not used in RID/ADR
5	Carriage to be in accordance with ADR or RID
6 & Sched 1	The GB tank/bulk marking scheme and use of the Emergency Action Code (EAC) (linked to the Dangerous Goods Emergency Action Code List (DG EAC List))
11	Derogations and transitional provisions (linked to the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions (ADTP))
12	Authorisations

There may be questions concerning GB Emergency Action Codes, their use and interpretation. A complete list of codes is published in the Dangerous Goods Emergency Action Code List, **but you do not need to obtain this publication solely for the purpose of the examinations**. The SQA issues relevant extracts from the document to all candidates on the day of the examinations.

In the title of each Group, the syllabus shows the parts of RID or ADR that may be examined. In all cases, questions from the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG2009) (as amended) may be asked.

The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway (ADN) is the only regulatory document permitted for the Inland Waterway examination paper.

You are only required to record references to the 2009 'Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (CDG2009)' where one has been **specifically** asked for in a reference box within the examination paper.

## What you will not be asked

Questions will not be based on 'industry-specific' texts — for example sector guidance produced by trade associations — as these are not readily available to all candidates.

## Format of examinations

You will be given an examination booklet which contains the questions and provides space for your answers.

The Core paper will consist of compulsory questions covering the syllabus topics. The questions will require short responses. The pass mark is 32 and the examination lasts for 1 hour 15 minutes, from 09.30 to 10.45.

The All Classes paper will comprise a mixture of structured and short response questions. There will be compulsory questions covering the syllabus topics. The pass mark will be 32 and the examination will last for 1 hour 45 minutes, from 11.15 to 13.00.

The mode papers (Road/Rail/Inland Waterways) will have two sections, as follows:

- ◆ Section A requires completion of a case-study, worth 70% of the total mark. You must answer **only one** case study from a choice of three (two for the Inland Waterways paper).
- ◆ Section B will contain a range of compulsory questions which will make up 30% of the final mark. Classes will be sampled across the mode examinations.

The pass mark will be 32, derived from Sections A and B.

The mode paper examination will last for 1 hour 45 minutes, from 14.00 to 15.45.

You should be able to demonstrate your understanding and be able to show steps as to how you reached your conclusions.

This syllabus has been approved by SQA and DfT.



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# Core

**NOTE:** The Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations (CDG2009) (as amended) and the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions (ADTP) may be examined as appropriate.

**Group 1** Classification; Identification (RID/ADR/ADN Parts 1, 2 and 3)

## **Topic 1** Classification

1.1 The broad principles of the UN classification system for dangerous goods. You should understand:

- ◆ the regulations governing classification
- ◆ the general principles of classification procedures for dangerous goods and how to apply them
- ◆ the responsibilities of the various participants

1.2 An understanding of the basic hazards inherent for each of the classes.

1.3 The concept of, and methods for, classifying substances with multiple hazards and indicating degrees of danger. You should understand and have knowledge of:

- ◆ the concept of Packing Groups
- ◆ the Table of Precedence and its role in Classification

1.4 An understanding of the regulatory requirements that apply to articles and equipment that contain dangerous goods and how the regulations deal with them.

## **Topic 2** Identification

2.1 An understanding of the international framework for the identification of dangerous goods.

2.2 The definition of UN numbers, proper shipping names, NOS entries and preparations/solutions/mixtures within the various regulatory regimes. You should understand and have knowledge of:

- ◆ how the various identification systems work and are applied
- ◆ the concept of Collective Entries relating to the various classes

**Group 2      Packing and tank provisions; Marking, labelling and placarding; Documentation requirements (RID/ADR/ADN Parts 1, 3.4, 3.5, 4, 5 and 6)**

**Topic 3      Packing and tank provisions**

3.1      The nature of commonly available packagings and tanks used for transporting dangerous goods by road, rail and inland waterway.

- ◆ You should be able to recognise packing systems such as packagings; IBCs; large packagings; portable tanks, tank-containers; demountable tanks; road tank-vehicles and rail tank-wagons; bulk carriage vehicles, wagons and containers; batteries of receptacles; tubes; multiple element gas containers (MEGCs)
- ◆ Ability to distinguish between fully regulated packaging types and the following:
  - excepted quantities
  - limited quantities
  - and how these concessions apply
- ◆ Ability to distinguish between different tank types, UN portable tanks, RID/ADR tank-containers, UN MEGCs and RID/ADR MEGCs, etc.

3.2      The basic principles of the design examination, testing and approval systems for packagings, tanks and bulk transport units. You should understand:

- ◆ the importance of the correct packaging, tank and bulk transport unit design requirements

3.3      The basic principles of approval and the coding system for identifying packaging types.

- ◆ Selection of appropriate packages and application of general provisions related to packages and package filling
- ◆ the principles of routine examination and testing as applied to packagings, tanks and bulk transport units

**Topic 4      Marking, labelling and placarding**

4.1      The basic principles of marking, labelling of packages and their application as defined in CDG2009 (as amended), ADR, RID and ADN. You should understand:

- ◆ the principles of marking and placarding of transport units

- Topic 5      Documentation requirements**
- 5.1      The requirements for dangerous goods documentation (including Electronic Data Interchange (EDI) systems).
- ◆ An understanding of the requirements of the various regulations
  - ◆ Ability to produce the dangerous goods description required on the transport document
- 5.2      The specific documentation requirements for the journey to be undertaken including the interface with other modal regulations.

**Group 3      Exemptions and concessions; Environmental protection; Training; Legal framework (RID/ADR/ADN Parts 1, 2 and 3)**

- Topic 6      Exemptions and concessions**
- 6.1      The various exemptions and/or concessions provided in the regulations covering the transport of dangerous goods by road, rail and inland waterways.
- ◆ Excepted quantities and limited quantities, special agreements and exemption provisions and their impact on the application of the regulations.

- Topic 7      Environmentally hazardous substances**
- 7.1      Identification of possible impact and consequences of environmental pollution.
- ◆ A general understanding of the possible causes of environmental pollution during the loading, unloading and transport of dangerous goods and the associated duties with regards to clean up and reporting of such incidents.
- 7.2      Accident and incident investigation and reporting requirements.

- Topic 8      Training**
- 8.1      The statutory training requirements for persons involved in the carriage of dangerous goods.
- ◆ Training for all those involved in the carriage of dangerous goods and within the transport operation, eg loading, unloading and parking.
  - ◆ The need to update training and keep training records.

## **Topic 9      Legal framework**

9.1      The regulations governing the appointment, duties and training of the Dangerous Goods Safety Adviser (DGSA) and the DGSA examination requirements. You should understand:

- ◆ the legal responsibilities and duties of the DGSA
- ◆ the relationship of the DGSA with the undertaking
- ◆ the relevance of the qualification to the business of the undertaking

9.2      The inter-relationship between the various national and international dangerous goods transport regulations. You should understand:

- ◆ the inter-relationship of the sea and air regulations with the other modes

9.3      The provisions concerning security.

- ◆ An understanding of the security provisions and the associated training requirements.
- ◆ Ability to identify high consequence dangerous goods (HCDG) and the thresholds which apply.

# All Classes

**NOTE:** The Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations (CDG2009) (as amended) and the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions (ADTP) may be examined as appropriate.

## **Group 1 Classification (RID/ADR/ADN Parts 1, 2 and 3)**

### **Topic 1 Classification**

1.1 The classification of dangerous goods into the nine UN classes and their divisions. You should understand:

- ◆ the structure of the UN classification system and the divisions of the various classes

1.2 The hazards associated with all the UN classes and their divisions. You should understand:

- ◆ the characteristics, primary and subsidiary hazards and properties of each of the UN classes and their divisions including environmentally hazardous substances

1.3 Use of UN numbers, proper shipping names, NOS entries, and procedures for solutions and mixtures. You should understand:

- ◆ how identification methods work and are applied

## **Group 2 Packing and tank provisions\*; Marking and labelling; Documentation requirements; Limited and excepted quantities (RID/ADR/ADN Parts 1, 3.4, 3.5, 4, 5 and 6)**

### **Topic 2 Packing and tank provisions**

2.1 The class-specific features of packing and tank provisions\* for the transport of dangerous goods.

- ◆ An understanding of the class-specific features of packing and tank provisions including the differences between excepted and limited quantities
- ◆ An ability to identify and select suitable packagings from the regulations for a particular substance, mixture or article
- ◆ An understanding of the design, construction and testing regimes for packagings, tanks and bulk transport units, including approval marking requirements

- ◆ An ability to distinguish between different tank types, eg UN portable tanks, RID/ADR tank-containers, UN MEGCs and RID/ADR MEGCs, etc.

\*This refers to the packagings, tanks and other transport units outlined in Topic 3 of the Core syllabus.

### **Topic 3 Marking and labelling**

3.1 The class-specific requirements for the marking and labelling of dangerous goods.

- ◆ an understanding of the different marking requirements including excepted and limited quantities markings
- ◆ you should understand the class-specific marking, labelling and placarding requirements applying to packagings used for the carriage of dangerous goods
- ◆ an ability to apply the appropriate marks and labels to packagings

### **Topic 4 Documentation requirements**

4.1 The class-specific requirements for the transport of dangerous goods. You should understand:

- ◆ the class-specific documentation requirements
- ◆ the additional documentation requirements for some classes of dangerous goods and specific requirements relating to regulations covering other modes of carriage

### **Topic 5 Limited quantities and Excepted quantities**

5.1 The class-specific concessions which apply to limited quantities and excepted quantities; packing, marking and documentation. You should understand:

- ◆ when specific substances may be prepared for carriage under limited and excepted quantities provisions
- ◆ the application of limited and excepted quantities provisions

## **Group 3 Training; Legal framework (RID/ADR/ADN Parts 1, 2 and 3)**

### **Topic 6 Training**

6.1 The statutory training requirements for persons involved in the carriage of dangerous goods. You should understand:

- ◆ training for all those involved in the carriage of dangerous goods and within the transport operation
- ◆ the need to update training and keep training records

**Topic 7      Legal framework**

7.1      The specific regulatory requirements for the transport by road, rail and inland waterway of the various UN classes and their divisions. You should understand:

- ◆ the relationship between RID/ADR/ADN and the CDG Regulations along with the ADTP

# Road

**NOTE:** The Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations (CDG2009) (as amended) and the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions (ADTP) may be examined as appropriate.

**Group 1** Transport units; Marking and placarding; Documentation (ADR Parts 5, 6, 7, 8 and 9)

**Topic 1** Transport equipment

**Note:** The term transport equipment refers to transport units, as defined, and all other transport equipment including freight containers, bulk containers, fixed tanks, demountable tanks, tank-containers, portable tanks and multiple element gas containers (MEGCs)

1.1 The selection of appropriate transport equipment for the carriage of dangerous goods in packages, tanks (including MEGCs) and bulk. You should have an understanding and appreciation of:

- ◆ the various types of transport equipment and their use (purpose)
- ◆ the examination and approval schemes associated with different types of transport equipment and the need for periodic inspection and approval/markings

You should also be able to distinguish between different tank types, eg UN portable tanks, RID/ADR tank-containers, UN and RID/ADR MEGCs, etc.

**Topic 2** Marking and placarding

2.1 The marking and placarding of vehicles and transport units. You should understand:

- ◆ the marking and placarding requirements of the applicable regulations as they apply to vehicles; tank-containers; road tank-vehicles; demountable tanks and batteries of receptacles/tubes/cylinder trailers (MEGCs), UN portable tanks, freight containers and bulk transport units
- ◆ the operational requirements associated with marking and placarding, in particular the duties of all parties involved

**Topic 3** Documentation

3.1 The applicable documentation requirements of ADR.

- ◆ You should understand the following documentation:
  - Transport document
  - Instructions in writing

- Photographic identification
- Certificate of approval
- Competent authority approval
- Drivers training certificate
- Container packing certificate
- Accident report and serious incident report

- ◆ You should have the ability to interpret the regulations and complete the documentation

## **Group 2 Compliance thresholds; Filling, stowage, loading and segregation; Cleaning and/or decontamination (ADR Parts 1, 4, 7 and 8)**

### **Topic 4 Compliance thresholds**

4.1 The exemption/concession thresholds available within the regulations with regard to transport documentation; carrier duties; operational provisions, such as parking and supervision requirements; vehicle equipment. You should understand:

- ◆ The available exemption/concession thresholds (for example, small load exemption, limited quantities) within the regulations governing the transport of dangerous goods by road.

You must be able to correctly distinguish the differences between them.

4.2 The provisions concerning security in relation to vehicle operations.

- ◆ You should have a general understanding of the security provisions
- ◆ You should be able to identify high consequence dangerous goods and the thresholds which apply
- ◆ You should be able to identify the extent to which a particular transport operation is subject to the security provisions and understand the requirements relating to security plans

### **Topic 5 Filling, stowage, loading and segregation**

5.1 The specific requirements of the regulations with regard to safe loading and stowage, correct filling ratios and ullage.

- ◆ You should have a general understanding of the importance of correct filling procedures and the implications of under/over filling

5.2 The principles of load security (safety).

- ◆ You should have a general understanding of the importance of safe loading, stowage and securing

5.3 The specific requirements of the regulations with regard to the segregation of dangerous goods. You should understand:

- ◆ the concept of mixed loading on vehicles
- ◆ the segregation requirements specified in the regulations

**Topic 6 Cleaning and/or decontamination**

6.1 The requirements for proper cleaning and decontamination procedures during the transport of dangerous goods.

**Group 3 Operational procedures; Emergency response requirements; Environmental protection; Training; Legal framework (ADR Parts 1, 5, 7, 8 and 9)**

**Topic 7 Operational procedures**

7.1 The key features of typical equipment and procedures governing common operations, such as safety equipment; loading; securing; operation of transfer equipment; unloading; cleaning and purging; route restrictions. You should understand:

- ◆ the need for written procedures covering the principal operations associated with the transport of dangerous goods by road
- ◆ the procedures for the allocation of tunnel codes to substances in the dangerous goods list and be able to explain the application of the tunnel code restriction system

**Topic 8 Emergency response requirements**

8.1 You should understand:

- ◆ the need for procedures to deal with emergencies which may arise during the carriage of dangerous goods by road.
- ◆ the type of equipment that must be carried on board the vehicle.
- ◆ and be able to interpret and explain the GB Emergency Action Code (EAC) system

**Topic 9 Environmental protection**

9.1 The principal sources of environmental pollution during road transport operations. You should understand:

- A those activities which take place during loading, unloading and delivery operations (including emergencies) which could give rise to environmental pollution
- B the control measures which may be appropriate

## **Topic 10 Training**

10.1 The statutory training requirements for those involved in the transport of dangerous goods by road, such as driver training requirements; the vocational training certificate; additional training requirements for others involved in the operation; training records. You should understand:

- ◆ the statutory training requirements for those involved in the transport of dangerous goods by road
- ◆ the importance of appropriate training for all those involved in transport operations
- ◆ the need to keep records of all such training

## **Topic 11 Legal Framework**

11.1 Safety obligations of the participants.

- ◆ You should understand the safety obligations of the participants as set out in ADR.
- ◆ You should also understand the DGSA's functions and duties.

# Rail

**NOTE** The Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations (CDG2009) (as amended) and the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions (ADTP) may be examined as appropriate.

**Group 1** Transport units; Marking and placarding; Documentation (RID Parts 4, 5 and 6)

**Topic 1** Transport equipment

**Note:** The term transport equipment refers to transport units, as defined, and all other transport equipment including freight containers, bulk containers, fixed tanks/tank-wagons, demountable tanks, tank-containers, portable tanks and multiple element gas containers (MEGCs).

1.1 The selection of appropriate transport equipment for the carriage of dangerous goods in packages, tanks (including MEGCs) and bulk.

You should have an understanding and appreciation of:

- ◆ the various types of transport equipment and their use (purpose)
- ◆ the examination and approval schemes associated with different types of transport equipment and the need for periodic inspections and approval/markings

You should also be able to distinguish between different tank types, eg UN portable tanks, RID/ADR tank-containers, UN and RID/ADR MEGCs, etc

**Topic 2** Marking and placarding

2.1 The marking and placarding of rail wagons and other rail transport units.

You should understand:

- ◆ the marking and placarding requirements of the applicable regulations as they apply to wagons; rail tank-wagons; battery-wagons; tank-containers; swap bodies; demountable tanks; MEGCs; UN portable tanks, freight containers and bulk transport units
- ◆ the operational requirements associated with marking and placarding, in particular the duties of all parties involved

**Topic 3** Documentation

3.1 The applicable documentation requirements of RID.

You should understand the provisions relating to the following documentation:

- Transport document
- Instructions in writing
- Photographic identification
- Competent authority approval
- Container packing certificate
- Accident report and serious incident report

You should have the ability to interpret the regulations and complete the documentation

## **Group 2 Compliance thresholds; Filling, stowage, loading and segregation; Cleaning and/or decontamination (RID Parts 1, 4 and 7)**

### **Topic 4 Compliance thresholds**

4.1 You must be able to correctly distinguish the exemption/concession thresholds available within the rail regulations (for example, limited quantities) and the differences between them.

4.2 The provisions concerning security in relation to rail operations.

- ◆ You should have a general understanding of the security provisions
- ◆ You should be able to identify high consequence dangerous goods and the thresholds which apply
- ◆ You should be able to identify the extent to which a particular transport operation is subject to the security provisions and understand the requirements relating to security plans

### **Topic 5 Filling, stowage, loading and segregation**

5.1 The specific requirements of the regulations with regard to safe loading and stowage, correct filling ratios and ullage.

You should have a general understanding of the importance of correct filling procedures and the implications of under/over filling

5.2 The principles of wagon and load security (safety).

You should have a general understanding of the importance of safe loading, stowage and securing

5.3 The specific requirements of the regulations with regard to the segregation of dangerous goods.

You should understand:

- ◆ the concept of mixed loading on rail wagons

- ◆ the on-train segregation and prohibition requirements specified in the regulations

**Topic 6      Cleaning and/or decontamination**

6.1            The requirements for proper cleaning and decontamination procedures during the transport of dangerous goods.

**Group 3      Operational procedures; Emergency response requirements; Environmental protection; Training; Legal framework (RID Parts 1, 5 and 7)**

**Topic 7      Operational procedures**

7.1            The key features of typical equipment and procedures governing common operations, such as safety equipment; loading; securing; operation of transfer equipment; unloading; cleaning and purging; shunting and marshalling.

You should understand:

- ◆ the need for written procedures covering the principal operations associated with the transport of dangerous goods by rail

**Topic 8      Emergency response requirements**

8.1            The arrangements needed to deal with emergencies.

You should:

- ◆ understand the need for procedures to deal with emergencies which may arise during the carriage of dangerous goods by rail
- ◆ and be able to interpret and explain requirements relating to the GB Emergency Action Code (EAC) system

**Topic 9      Environmental protection**

9.1            The principal sources of environmental pollution during rail transport operations.

You should understand:

- ◆ those activities which take place during loading, unloading and associated operations (including emergencies) which could give rise to environmental pollution
- ◆ the control measures which may be appropriate

**Topic 10 Training**

10.1 You should understand:

- ◆ the statutory training requirements for those involved in the transport of dangerous goods by rail
- ◆ the importance of appropriate training for all those involved in transport operations
- ◆ the need to keep records of all such training

**Topic 11 Legal framework**

11.1 Safety obligations of the participants.

You should understand

- ◆ the safety obligations of the participants as set out in RID
- ◆ the DGSA's functions and duties

# Inland Waterways

## **Group 1 Classification; Transport packing and tank provisions; Marking, labelling and placarding; Documentation (ADN Parts 4, 5 and 6)**

### **Topic 1 Classification**

1.1 The classification system used in ADN. You should understand:

- ◆ the classification system used in ADN
- ◆ the relationship between the IMDG Code and ADN
- ◆ that certain substances not otherwise classified as dangerous goods for transport are regulated as such under the provisions of ADN
- ◆ the conditions in which the requirements apply

### **Topic 2 Transport packing and tank provisions**

2.1 The selection of appropriate containment systems for the transport of dangerous goods and an overview of the containment systems permitted for carriage by inland waterway. You should understand:

- ◆ the packages and IBCs which are permitted for transport by inland waterway
- ◆ that freight containers, swap bodies, portable tanks and tank-containers are acceptable forms of transport containment for carriage by inland waterway
- ◆ that the carriage of certain dangerous goods is permitted in bulk and the requirements relating to such carriage
- ◆ that the carriage of certain dangerous goods is permitted in inland waterway tank vessels
- ◆ the prohibition on the transport of dangerous goods in the cargo tanks of dry-cargo vessels
- ◆ the examination and approval schemes associated with the various containment systems and the need for periodic inspection and approval

### **Topic 3 Marking, labelling and placarding**

3.1 The marking, labelling and placarding of inland waterway vessels and transport units. You should understand:

- ◆ the marking, labelling and placarding requirements of the applicable regulations and the influence of other modal regulations for packages, IBCs, vehicles, containers and tanks taken on board inland waterway vessels
- ◆ the additional requirements for the marking of inland waterway vessels with blue cones/lights

## **Topic 4      Documentation**

4.1      The applicable documentation requirements for ADN.

- ◆ You should understand the documents which must be kept on board an inland waterway vessel:
  - Vessel approval certificates
  - Inland waterway transport documents
  - Instructions in writing
  - Stowage plan
  - Training certificate for a dangerous goods expert on board
  - A book in which required measurements are recorded
  - Additional requirements for double-hulled vessels
  - Inspection documents for fire-fighting appliances, fire hoses and any special equipment to be carried
  - Photographic identification
  - Container packing certificate
  - Accident report and serious incident report
  
- ◆ You should have the ability to interpret the regulations and complete the documentation You should understand the exemption procedure for the vessel approval certificate for pushed barges

## **Group 2      Compliance thresholds; Security; Filling, stowage, loading and segregation; Cleaning and/or decontamination (ADN Parts 1 and 7)**

### **Topic 5      Compliance thresholds**

5.1      You should understand the exempted quantities of ADN.

5.2      The provisions concerning security in relation to inland waterway operations.

- ◆ You should have a general understanding of the security provisions
- ◆ You should be able to identify high consequence dangerous goods and the thresholds which apply
- ◆ You should be able to identify which transport operations are subject to the security provisions and know the requirements relating to security plans

### **Topic 6      Stowage, loading and segregation**

6.1      The specific requirements of the regulations with regard to safe loading and stowage.

You should understand:

- ◆ the need for Competent Authority approval for places of loading, unloading or cargo transfer operations
- ◆ the class-specific loading, carriage and unloading requirements
- ◆ the prohibitions with regard to mixed loading in the holds of inland waterway vessels, containers and other transport units
- ◆ the mixed loading rules for sea-going vessels
- ◆ any class-specific mixed loading requirements
- ◆ the various safety procedures such as: ventilation requirements and lighting rules during loading and unloading; cleaning of holds and cargo decks prior to loading; separation rules with respect to engine rooms, wheelhouses, sources of heat and on-board accommodation; the precautions against sparking; the use of synthetic ropes; prohibitions on filling or emptying on board

6.2 Correct stowage procedures.

You should understand:

- ◆ the need for a stowage plan
- ◆ when on-deck stowage of dangerous goods is permitted

**Topic 7 Cleaning and/or decontamination**

7.1 You should understand the requirements for proper decontamination of dangerous goods containment systems and the precautions which must be taken with respect to inland waterway tank vessels

You should know the liquids prohibited or restricted during cleaning operations

**Group 3 Operational procedures; Emergency response requirements; Environmental protection; Training; Legal framework (ADN Parts 1, 2 and 8)**

**Topic 8 Operational procedures**

8.1 The requirements for the operation of inland waterway vessels. You should understand:

- ◆ the requirements for instructions for the use of devices and installations on board inland waterway vessels
- ◆ the requirement to protect dangerous goods on board from the influences of weather and spray
- ◆ the prohibitions on unauthorised persons on board inland waterway vessels
- ◆ the requirements and prohibitions for the running of engines
- ◆ the provisions of ADN regarding fires; naked lights; use of portable lamps; smoking; heating and cooking on board inland waterway vessels

- ◆ the prohibitions regarding the heating of holds of inland waterway vessels
- ◆ the gross quantity limits applicable to the nine classes of dangerous goods on board inland waterway vessels
- ◆ the requirements for mooring and berthing inland waterway vessels
- ◆ the reporting duty of masters
- ◆ the rules for access to holds, double-hull spaces, double bottoms and the need for ventilations of holds

**Topic 9      Emergency response requirements**

9.1            The arrangements needed to deal with an emergency which arises during the carriage of dangerous goods by inland waterway. You should understand:

- ◆ the need for appropriate emergency procedures for all those involved in loading, unloading and carriage of dangerous goods in inland waterway vessels
- ◆ the requirements for fire-extinguishing arrangements and the requirements for special equipment to be provided on board inland waterway vessels

**Topic 10     Environmental protection**

10.1          The principal sources of environmental pollution during inland waterway transport operations.

You should understand:

- ◆ those activities which take place during loading, unloading and associated operations (including emergencies) which could give rise to environmental pollution
- ◆ the control measures which may be appropriate

**Topic 11     Training**

11.1          The statutory training requirements for those involved in the transport of dangerous goods by inland waterway.

You should understand:

- ◆ the requirement for a trained dangerous goods expert on board inland waterway vessels, the content of that training and the certificate which the expert is required to hold
- ◆ the requirement for crew to be trained in the use of the fire-extinguishing appliances on board
- ◆ the requirement for crew to be familiar with the use of any special equipment which must be on board inland waterway vessels

## **Topic 12 Legal Framework**

12.1 The international regulations and standards relating to the transport of dangerous goods by inland waterways.

You should understand the status of the European ADN provisions and the existence of a distinct framework of rules for the carriage of dangerous goods by inland waterway vessels along the river Rhine and its tributaries (ADNR)

12.2 Safety obligations of the participants.

- ◆ You should understand the safety obligations of the participants as set out in ADN
- ◆ You should understand the DGSA's functions and duties

## **Group 4 Construction of inland waterway vessels; Sea-going vessels; Stability of container vessels; Tank vessels (ADN Part 9)**

### **Topic 13 Construction and stability of vessels**

13.1 You should be aware of the rules for the design and construction of inland waterway vessels and sea-going vessels which also pass along inland waterways.

13.2 You should be aware of the rules for the stability of inland waterway vessels carrying containers.

### **Topic 14 Tank vessels**

14.1 You should be aware of the special rules for the design, construction and operation of inland waterway tank vessels.

14.2 You should be aware of the additional rules concerning the marking, mode of navigation, mooring and berthing of inland waterway tank vessels.

14.3 You should be aware of the existence of special rules for the construction of Type G, Type C and Type N inland waterway tank vessels.