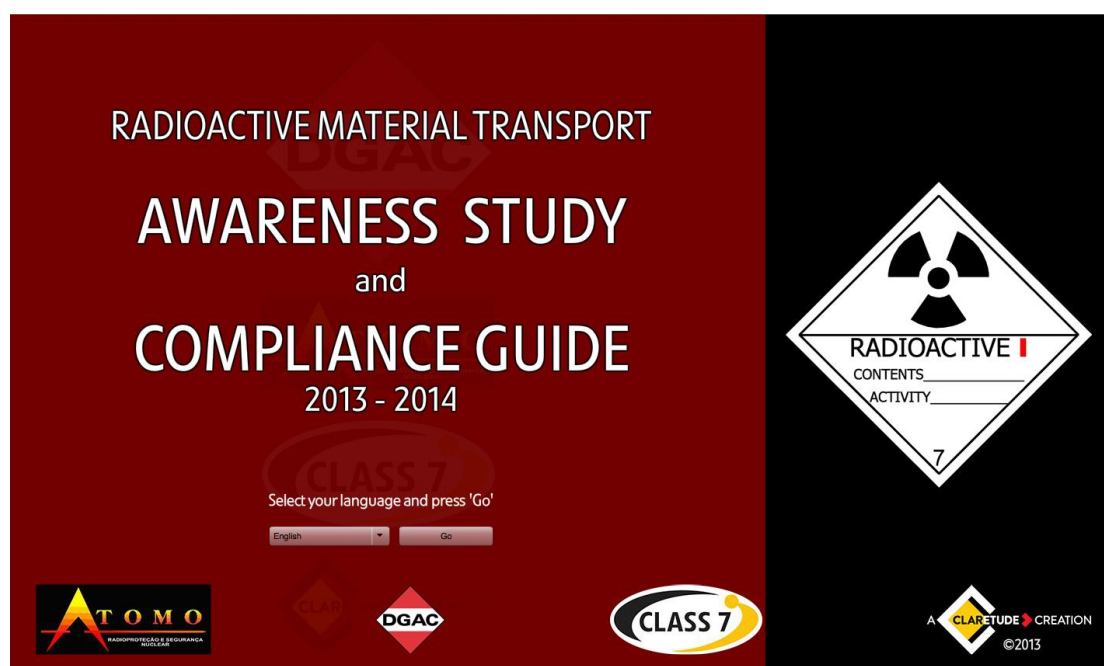


1. Overview

It is important that operators receive effective training in the variety of aspects of transporting radioactive material and have methods of marking and labelling packages, placarding vehicles, producing transport documentation and preparing effective emergency plans which meet the regulatory requirements. The awareness training programme and the transport compliance guide described in this paper is intended to illustrate a system that provides a consistent approach which also provides the user with references to the regulatory text for the four modes of transport namely road, rail, sea and air.

The user of this multimedia programme will be able to choose English, Portuguese and Spanish languages and make reference to the transport regulations of Europe, USA and Brazil for road, of Europe and USA for rail, and the IMDG and IATA regulations for international sea and air transport respectively.

The addition of other languages and other national transport regulations can be incorporated as required to meet user requirements.





2. Structure

The structure has been developed to be **clear** in its presentation, **simple** in its text to make it understandable to the user and **concise** in providing additional information such as regulatory text, and further explanatory text .

3. The Awareness Training Programme

The three elements of the programme are:

i. Select the Chapter

There are 14 Chapters that can be studied in sequence and referred to randomly to find information for specific topics.

ii. Select a Section

Within each Chapter there are a number of sections that provide information of the basic story / concept.

RAM TRANSPORT
AWARENESS STUDY AND
COMPLIANCE GUIDE
2013 - 2014

STUDY PROGRAMME
CHAPTERS
Basic Awareness
Transport related risks
Intrinsic material risks and issues
The rule books
Organising the material
Packaging
Permitted transport
Identifying material
Warning of the dangers
The paperwork
Carrying the material
Security
Emergency protocols
Performance control

PACKAGING

Packaging Basics
Packaging Types
Package activity and content limits
Package performance standards
Package certification
Package type review

ADR/RD 1.2.1, 2.2.7.2.4, 4.1.9, 6.4
IMR 173.403-31/461.7
IMDG 1.2.1, 2.2.2.4, 4.1.9, 6.4
IATA App A, 10.3.11, 10.5-10.13, 10.6
CNEC/01 5.2.1-7, 7.3.2-3, Tabela 1, 8



Type B

There are six different grades of radioactive material packaging
Excepted, Industrial, Types A, B, C and Uranium hexafluoride packs
Fissile material is OK in all package types apart from Excepted

CLASS 7

Simples. Sistema de operação em tres etapas básicas –
1. Seleccione um capítulo, 2. Seleccione uma seção, 3. Consulte o relato básico


TRANSPORTE DE MATERIAL
RADIOATIVO CONSCIENTIZAÇÃO
E GUIA DE CONFORMIDADE
2013 – 2014

PROGRAMA DE ESTUDO
CAPÍTULOS
Conscientização Básica
Riscos relacionados ao transporte
Riscos e problemas intrínsecos
Livro de regras
Organização do material
Embalagens
Transporte permitido
Identificação do material
Avisos de perigo
Documentos
Carregamento do material
Segurança Física
Protocolos de emergência
Controle de desempenho

EMBALAGEM

Embalagens básicas
Tipos de embalagem
Atividade do embalado e limites de
Padrões de desempenho
Carregamento e transporte
Revisão do tipo de embalado

ADR/RD 1.2.1, 2.2.7.2.4, 4.1.9, 6.4
IMR 173.403-31, 173.681-467
IMDG 1.2.1, 2.2.2.4, 4.1.9, 6.4
IATA App A, 10.3.11, 10.5-10.13, 10.6
CNEC/01 5.2.1-7, 7.3.2-3, Tabela 1, 8



Type B

Existem seis diferentes classificações de material radioativo
Exceptivo, Industrial, Tipos A, B, C e Hexafluoreto de urânio
Material fissil é permitido em qualquer tipo de embalado

iii. Additional information

By selecting the text in a Section further explanatory text will be displayed together with the corresponding regulatory references for road, rail, sea and air transport.


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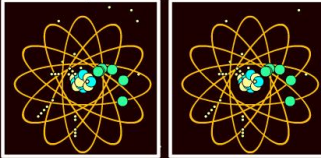
ADR/RID 1.2.1, 2.2.7.2.4, 4.1.9, 6.4
HMR 173.403-31/461.7
IMDG 1.2.1, 2.2.7.4, 4.1.9, 6.4
IATA App A, 10.3.11, 10.5.1-13, 10.6
CEN/EN 01.5.2.1-7, 7.3.2.3, Tabela 1, II



Uranium hexafluoride

There are six different grades of radioactive material packaging
Excepted, Industrial, Types A, B, C and Uranium hexafluoride packs
Fissile material is OK in all package types apart from Excepted

CLASS 7



Fissile material packagings are always designed to the most demanding standards
Fissile material packaging has to be able to ensure that criticality is controlled effectively.
This requires extra test procedures to be implemented and consequential extra certification requirements.
The Competent Authority must approve and certify the design of all fissile material packaging.

Resumido.

Caso sejam requeridos mais detalhes –

1. Consulte os regulamentos de referencia/localização/modo ícones
2. Selecione o texto básico para ver o painel detalhado


TRANSPORTE DE MATERIAL
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PROGRAMA DE ESTUDO
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Transporte permitido
Identificação do material
Avisos de perigo
Documentos
Cargamento do material
Segurança Física
Protocolos de emergência
Controle de desempenho

EMBALAGEM

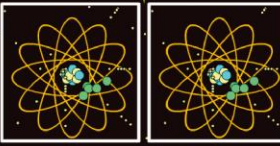
Embalagens básicas
Tipos de embalagem
Atividade do embaledo e limites de
Padrões de desempenho
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Revisão do tipo de embaledo

ADR/RID 1.2.1, 2.2.7.2.4, 4.1.9, 6.4
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CEN/EN 01.5.2.1-7, 7.3.2.3, Tabela 1, II



Uranium hexafluoride

Existem seis diferentes classificações de material radioativo
Exceptivo, Industrial, Tipos A, B, C e Hexafluoreto de uranio
Material fissil é permitido em qualquer tipo de embalagem



Embalagens para material fissil são sempre projetadas para as normas mais exigentes
Embalagem de material fissil deve ser capazes de garantir que a criticidade está efetivamente controlada
Isto requer procedimentos de testes extras a serem implementados e consequentemente requerem uma certificação extra
A Autoridade Competente deve aprovar e certificar o projeto de toda a embalagem com material fissil

3.1 Providing information in context

When it is appropriate, the programme provides information in the context of the transport regulations and thereby provides the user with the opportunity to make direct reference to the associated transport regulations for each of the areas displayed

in the Chapters and Sections. This will enable the user to refer directly to the regulatory text for further study and improved understanding.

3.2 Access

The training programme will be accessed on-line and a record of the user and dates of access will be registered to provide training records for the operator.

4. Preparation of the Transport Document

Information and guidance will be available for the preparation of the transport document with the user specifying the UN number of the package to be transported, the data entries of the document being identified. This will not only provide training for the operator but also a consistency in the preparation of the transport document that will be compliant with the transport regulations.

5. Labelling of packages and placarding of road vehicles

Information and guidance will also be available for the labelling of packages and the placarding of road vehicles with the user specifying the UN number of the package to be transported.

6. Emergency arrangements

The elements of a transport emergency plan will be identified to provide the user with a template that will meet the transport regulations for road transport.

7. Updates

The interactive programme will be updated to reflect all changes to the transport regulations as they are implemented. By providing the operator with records of the registered users and the date of their training the operator can provide the necessary evidence of training and refresher training for its staff.

8. Availability

Further details are available from ATOMO Radioproteção e Segurança Nuclear and announcements will be via the ATOMO website and elsewhere.

www.atomo.com.br

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