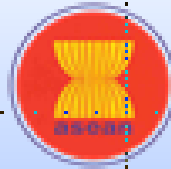

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Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Course Name: Sustainable Human Resource Development in logistics services for ASEAN Member States	Rev / Date : Version 1 / October 2014
Module: Title – “DG Handling”	Session no : 12
	No of hours : 16

Learning Objectives:

- To understand the basic knowledge on hazard identification, basic terms and definition, basic classification, relevant principle methods of basic classifications.
- To understand how people are exposed to chemicals through several routes of exposure.
- To understand basic concepts of dose response relationship, effects of chemicals to human and factors determining the effects
- To understand flammability concept and elements of fire
- To understand the UN Transport regulations, its history and basis as model regulations for international classification system for other modes of transport.
- To understand the linkage into the ASEAN Protocol 9 framework on the international carriage of dangerous goods in ASEAN.
- To understand 9 classes of dangerous goods classification and other relevant basic terms such as Class, Division, Packaging Group (PG), UN Number (UNNO) and Proper Shipping Names (PSN).
- To understand basic hazard communication such as Labelling requirements, Dangerous Goods Declaration (DGD) or Multi-modal Dangerous Goods Form.
- To understand the basic requirement of packaging as well as required DG labels on packaging.
- To understand UN standard of packaging code as well as highlight the possible combination of all these codes.
- To understand different level of packaging strengths in compliance with the packing group
- To illustrate some examples of UN packaging.
- To elaborate other types of classification and labelling system
- To understand background and history of IMDG Code and how it will be used in shipping dangerous goods by sea.
- To understand background and history of IATA DGR and how it will be used in shipping dangerous goods by air.
- To understand the new globally harmonized system of classification and labelling of chemicals (GHS) and how it will be basically implemented.

Learner's Outcome

- Learners should be able to understand the basic principles of hazard classification and hazard communication of Dangerous Goods.
- Learners must be able to clearly understand 9 Classes of Dangerous Goods under UN Model regulations and understand marking and labelling requirements.
- Learners must be able to understand the relevant elements concerning dangerous goods packaging
- Learners must be able to apply the relevant Dangerous Goods regulations both IMDG Code and IATA DGR.
- Learners must be able to understand how GHS will be applied in the future as new classification system of chemicals and how it will be used with UN Model Regulations in the future.

Subject / Content	Time (mins)	Teaching Methods	Reference Materials
DAY 1: 18 November 2014 (8.00am – 5.00pm)			

<u>Chapter 1: Principle Concept to Chemical Management</u> Hazard Identification	8.00am – 8.10am 10	Lecture	Lecture notes Lecture powerpoint slides
Basic Terms and Definition	8.10am – 8.20am 10	Lecture	Lecture notes Lecture powerpoint slides
Basic Classification (Non-DG & DG)	8.20am – 8.35am 15	Lecture	Lecture notes Lecture powerpoint slides
Principle Methods of Basic Classification	8.35am – 8.45am 10	Lecture	Lecture notes Lecture powerpoint slides
Route of Exposure	8.45am – 9.00am 15	Lecture	Lecture notes Lecture powerpoint slides
Dose Response Relationship (Cause & Effect)	9.00am – 9.20am 20	Lecture	Lecture notes Lecture powerpoint slides
Effects of Chemicals to Human	9.20am – 9.35am 15	Lecture	Lecture notes Lecture powerpoint slides
Factors determining the effects	9.35am – 9.45am 10	Lecture	Lecture notes Lecture powerpoint slides
Flammability: Fire Triangle and Flashpoint	9.45am – 10.00am 15	Lecture	Lecture notes Lecture powerpoint slides

Tea-break	10.00am – 10.15am 15		
Chapter 2: International Classification of Dangerous Goods UNTDG – United Nations Recommendations on the Transport of Dangerous Goods	10.15am – 10.30am 15	Lecture	Lecture notes Lecture powerpoint slides
International Classification of Dangerous Goods, System of Linkage, ASEAN Protocol 9	10.30am – 11.00am 30	Lecture	Lecture notes Lecture powerpoint slides
Hazard Classification and Hazard Communication	11.00am – 11.20am 20	Lecture	Lecture notes Lecture powerpoint slides
9 Classes of Dangerous Goods	11.20am – 12.00pm 40	Lecture	Lecture notes Lecture powerpoint slides
Lunch-break	12.00pm – 1.00pm 60		
9 Classes of Dangerous Goods (continued)	1.00pm – 2.00pm 60	Lecture	Lecture notes Lecture powerpoint slides
Tea-break	2.00pm – 2.15pm 15		
Primary Terms in UNTDG (Class/Division, Primary Risks, Secondary Risks, Packing Group, UN Number, Proper Shipping Names)	2.15pm – 3.00pm 45	Lecture	Lecture notes Lecture powerpoint slides
Precedence of hazard characteristics (Examples are given in the class for discussion and better understanding)	3.00pm – 3.45pm 45	Lecture	Lecture notes Lecture powerpoint slides
Display of Hazard Labels	3.45pm – 4.00pm 15	Lecture	Lecture notes Lecture powerpoint slides

Other Marking and Labelling	4.00pm – 4.15pm 15	Lecture	Lecture notes Lecture powerpoint slides
Multimodal Dangerous Goods Form	4.15pm – 4.30pm 15	Lecture	Lecture notes Lecture powerpoint slides
Questions and Answers for Discussion	4.30pm – 5.00pm 30	Class Discussion	
Total (less break)			
DAY 2: 19 November 2014 (8.00am – 5.00pm)			
Chapter 3: UN Marking and Packaging Packaging for Dangerous Goods / Package Marking and Labelling	8.00am – 8.30am 30	Lecture	Lecture notes Lecture powerpoint slides
UN Marking and Packaging Code with Examples	8.30am – 9.30am 60	Lecture	Lecture notes Lecture powerpoint slides
Other Classification System (EU Labelling and NFPA)	9.30am – 10.00am 30	Lecture	Lecture notes Lecture powerpoint slides
Tea-break	10.00am – 10.15am 15		
Chapter 4-1: International Maritime Dangerous Goods Code (IMDG Code) Background and Objectives of IMDG Code	10.15am – 10.25am 10	Lecture	Lecture notes Lecture powerpoint slides
Principles of IMDG Code	10.25am – 10.35am 10	Lecture	Lecture notes Lecture powerpoint slides
Layout of IMDG Code	10.35am – 10.45am 10	Lecture	Lecture notes Lecture powerpoint slides

IMDG Code Classification System (9 Classes/UN Number/PSN/Hazard Label)	10.45am-11.00am 15	Lecture	Lecture notes Lecture powerpoint slides
Stowage and Segregation Guidelines	11.00am – 11.20am 20	Lecture	Lecture notes Lecture powerpoint slides
Understanding Dangerous Goods List / Training Requirements / How to use IMDG Code (Program)	11.20am – 12.00pm 40	Lecture	Lecture notes Lecture powerpoint slides
Lunch-break	12.00pm – 1.00pm 60		
Chapter 4-2: IATA Dangerous Goods Regulations (IATA DGR) Background, Development and Principles of IATA DGR	1.00pm – 1.10pm 10	Lecture	Lecture notes Lecture powerpoint slides
Identification of Dangerous Goods by Air	1.10pm – 1.15pm 5	Lecture	Lecture notes Lecture powerpoint slides
Sections in IATA DGR	1.15pm – 1.20pm 5	Lecture	Lecture notes Lecture powerpoint slides
IATA DG Classification and Hazard Labels	1.20pm – 1.30pm 10	Lecture	Lecture notes Lecture powerpoint slides
Understanding the Blue Pages / States and Operators Variations / Training requirements / How to use IATA DGR	1.30pm – 2.00pm 30	Lecture	Lecture notes Lecture powerpoint slides

Tea-break	2.00pm – 2.15pm 15		
<u>Chapter 5: Basic Understanding about GHS (Globally Harmonized System of Classification and Labelling of Chemicals)</u> Why to implement GHS? What is GHS? and Objectives of GHS Scope of GHS	2.15pm – 2.30pm 15	Lecture	Lecture notes Lecture powerpoint slides
Basic Principles of GHS Key Elements of GHS Hazard Classification of GHS Building Block Approach under GHS	2.30pm – 3.00pm 30	Lecture	Lecture notes Lecture powerpoint slides
Hazard Communication under GHS - GHS Labels and elements - GHS Safety Data Sheet (SDS)	3.00pm – 3.40pm 40	Lecture	Lecture notes Lecture powerpoint slides
Basic Concept about Risk Assessment Risk Assessment vs Risk Management Hazard Based vs Risk Based Management System	3.40pm – 4.15pm 35	Lecture	Lecture notes Lecture powerpoint slides
Exposure Assessment GHS as a baseline of Chemical management	4.15pm – 4.25pm 10	Lecture	Lecture notes Lecture powerpoint slides
Examples of Risk Assessment and Management (Cartoon)	4.25pm – 4.30pm 5	Lecture	Lecture notes Lecture powerpoint slides
Questions and Answers for Discussion	4.30pm – 5.00pm 30	Class Discussion	
Total (less break)	450		
Total Time (mins)	900		