

Paper 1 November 2021

Q1 Pasotti an Italian manufacturer produces a pesticide preparation which is classified under the WHO Recommended Classification of Pesticides as coumarin derivative pesticide, solid, toxic with the active ingredient Warfarin. 10 marks

When tested The LD₅₀ oral of the 100% preparation was found to be 10 mg/kg

- (i) State the UN number of this preparation
UN 3027
- (ii) Does the proper shipping name need to be supplemented by a technical name? Justify your answer.
Yes, the technical name, Warfarin needs to be added as special provision 274 applies to this entry, which in turn requires the addition of the technical name in accordance with 3.1.2.8 and because it is a pesticide the technical name should be the ISO common name according to WHO classification guidelines per SP 61
- (iii) What packing group should be assigned to the 100% preparation? Explain your answer.
An LD₅₀ oral of 10 mg/kg is within the range 5 – 50 mg/kg to which PG II applies. Thus, it is assigned to PG II
- (iv) The manufacturer supplies it diluted in an inert diluent to give a concentration of 0.025%. The LD₅₀ of this solution is estimated at 8,000 mg/kg. Is this regulated for transport? Explain your answer.
No. The LD₅₀ of this solution is way above the threshold of 300 mg/kg for it to be considered toxic for transport based on oral toxicity

Ref: ADR 3.2.2 Table A, 3.2.1 Table A columns 1 & 6, 3.3 SP 61, SP 274, 3.1.2.8.1

Q2 A supplier in Dusseldorf, Germany wishes to ship 20,000 kg of Titanium powder, dry of packing group III to a customer in Antwerp in Belgium. 8 marks

- (i) The supplier wishes to ship in rigid plastic IBCs. Is this possible? Explain your answer.
Titanium powder, dry is assigned to UN 2546 and IBC08 applies to the PG III entry. This allows the use of rigid plastic IBCs 11H1, 11H2, 21H1, 21H2, 31H1 and 31H2
- (ii) When preparing the to return the empty uncleaned IBCs to the supplier the customer notices that two of the IBCs have passed the due date for their next 2.5 year periodic inspection. May the customer return these IBCs to the supplier for disposal or recycling of the dangerous goods residues and if so under what restrictions?
Yes, they may be returned for disposal or recycling of the dangerous goods residues provided the IBC are within 6 months of the date of expiry of the last periodic inspection unless otherwise approved by a Competent Authority
- (iii) How should this be acknowledged in the transport document?

The statement "CARRIAGEN IN ACCORDANCE WITH 4.1.2.2 (b)" should be included in the transport document.

Ref ADR 3.2.2 Table B, 3.2.1 Table A columns 1, 4 & 8, 4.1.4.2 IBC08, 4.1.2.2 (b), 5.4.1.1.11

Q3 4 marks

- (i) May Ethyl oxalate UN2525 be transported in an ADR fixed tank?
Yes, it may be carried in a L4BH or higher hierarchy tank
- (ii) May Zinc phosphide UN1714 be carried in a UN portable tank?
No, it may not as a UN portable tank instruction is not shown against that entry
- (iii) Who is responsible for ensuring that an exceptional check is made when the safety of the shell or equipment of a portable tank may have been impaired as a result of repair following an accident?
The portable tank operator

Ref ADR 3.2.1 Table A columns 1, 10 & 12, 1.4.3.4 (c)

Q4 What is the fixed payment penalty that may be levied in lieu of prosecution on an appointed DGSA who fails to perform their duties? 3 marks

€500

Ref CDGRR Schedule 2, Part 3, offence no 47

Q5 As the appointed DGSA you are reviewing paperwork and come across the transport document (next page) from one of their suppliers. 5 marks

State 3 errors associated with the description of the goods as shown on the transport document.

Any 3 from the following:

The proper shipping name is missing "water reactive"

The subsidiary hazard is not shown i.e. (4.3) is missing

The packing group is incorrect - PG II instead of PG I

The tunnel code is incomplete – the "B" is missing

Ref ADR 3.2.1 Table A column 2, 5, & 15, 5.4.1.1.1 (b) (c) (e) (f) (k), 5.4.1.4.1

MULTIMODAL DANGEROUS GOODS FORM

FOR DANGEROUS GOODS: you must specify: UN No., proper shipping name, hazard class, packing group (where assigned) and any other element of information required under applicable national and international regulations

1. Shipper / Consignor / Sender Acme Chemicals Industrial Zone Antwerp, Belgium		2. Transport document number 1234		3 Page 1 of 1 pages		4. Shipper's reference 01		5. Freight forwarder's reference		
6. Consignee Chemical Distributors XL Industrial Estate, Dublin, Ireland				7. Carrier (to be completed by carrier)						
				SHIPPER'S DECLARATION I hereby declare that the contents of this consignment are fully and accurately described below by the proper shipping name, and are classified, packaged, marked and labelled / placarded and are in all respects in proper condition for transport according to the applicable international and national governmental regulations.						
8. This shipment is within the limitations prescribed for: (Delete non applicable)				9. Additional handling information						
PASSENGER AND CARGO AIRCRAFT		CARGO AIRCRAFT ONLY								
10. Vessel / flight no. and date Voyager express		11. Port / place of loading Antwerp								
12. Port / place of discharge Dublin		13. Destination Dublin								
14. Shipping Marks				* Number and kind of packages; description of goods		Gross mass (kg)		Net mass		Cube (m3)
UN 3394 ORGANOMETALIC SUBSTANCE, LIQUID, PYROPHORIC (Terillium), 4.2, II, (E)										
15. Container identification No./ vehicle registration No. ABC123			16. Seal Number (s) S-401		17. Container/vehicle size & type Curtain sider trailer		18. Tare (kg) 10,000		19. Total gross mass (including tare) (kg) 26,000	
CONTAINER /VEHICLE PACKING CERTIFICATE I hereby declare that the goods described above have been packed/loaded into the container/vehicle identified above in accordance with the applicable provisions ** MUST BE COMPLETED AND SIGNED FOR ALL CONTAINER/VEHICLE LOADS BY PERSON RESPONSIBLE FOR PACKING/LOADING				21. RECEIVING ORGANIZATION RECEIPT Received the above number of packages/containers/trailers in apparent good order and condition unless stated heron: RECEIVING ORGANIZATION REMARKS:						
20. Name of company Acme Chemicals				Haulier's name		22. Name of company (OF SHIPPER PREPARING THIS NOTE) Acme Chemiocals				
Name / status of declarant Pierre Le Saux, warehouse supervisor				Vehicle reg. No.		Name / status of declarant Pierre LeSaux, warehouse supervisor				
Place and date Antwerp, 1 September 2021				Signature and date		Place and date Antwerp, 1 September 2021				
Signature of declarant <i>Pierre Le Saux</i>				DRIVER'S SIGNATURE		Signature of declarant <i>Pierre Le Saux</i>				

Q6

4 marks

(i) The driver of a dangerous goods vehicle asks their manager if they can have a helper to help with unloading.

Is this possible?

Yes, provided the helper as crew is able to operate the fire extinguishers and has received appropriate training in accordance with Chapter 1.3

(ii) A colleague coming off shift asks the driver for a lift as he will be passing by his home as he makes the dangerous goods delivery. Is this allowed?

No, passengers are not allowed

Ref ADR 8.2.3, 8.3.2, 8.3.1

Q7 Does a carrier require a written security plan if performing the following activities 5 marks

(i) Carriage of 5,000 L of UN 1203 in a tank?

Yes, it exceeds the limit of 3,000 L above which a Class 3 PG II substance is deemed a high consequence dangerous good and thus a security plan is required

(ii) Carriage of 5,000 L of UN 1202 in a tank?

No, it is a PG III flammable substance which is not considered a high consequence dangerous good irrespective of the amount carried in a tank

Ref ADR 3.2.1 Table A columns 1 &4, Table 1.10.3.1.2, 1.10.3.2.1

Q8 In the event of an emergency during carriage

4 marks

(i) what may the driver use their fire extinguishers for?

To put out small/initial fires in tyres, brakes and engine compartments

(ii) Can the extinguishers be use to tackle fires in the load compartment?

No, crew are not to tackle fires in the load compartment

(iii) Why should the battery master switch be activated?

To isolate the battery from the electrical wiring and thus minimise the risk of a spark

Ref ADR 5.4.3 Instructions in Writing first page

Q9 Flammable Aerosols are to be distributed on cardboard trays

5 marks

(i) What is their classification code

5F

- (ii) May they be distributed as Limited Quantities and if so under what conditions
Yes, provided the aerosols are not more than 1L in capacity, that they are attached to the trays by stretch or shrink wrap film, that each tray does not weigh more than 20 kg and that they bear the limited quantity mark.

Ref ADR 3.2.2 Table B, 3.2.1 Table A columns 1, 2, 3b & 7a, 3.4.1, 3.4.3, 3.4.7.1

Q10 What training is required for personnel who perform the duties of loader as defined in ADR 1.4?

2 marks

They must receive general awareness, function specific and safety training appropriate to their duties.

Ref ADR 1.3.2