

Paper 2 July 2021

Complete Case study 1 and either Case Study 2 or 3 Time allowed: 2 hours

Case Study 1 (Compulsory)

100 kg of 4-Nitrosophenol (UN3236) is to be shipped by road from Germany to a customer in Spain.

a) i) What is the minimum number of packages required? Explain your answer.

ii) Is the packaging required to be UN approved?

Ref:

b) i) What marks and labels must be applied to the packages? Provide all relevant details.

ii) Is it necessary to apply a No 1 explosives label?

Ref:

c) What, if any, orange plates are required to be displayed on the carrying vehicle? Justify your answer.

Ref:

d) What information relating to the goods must be shown on the transport document? Illustrate your answer

Ref:

e) What is the maximum load of this substance permitted to be carried on a vehicle?

Ref

- f) i) Does the carrying vehicle need to be equipped with a shovel, drain seal and collecting container?

Ref:

- g) Is an audible temperature alarm required to be fitted to the vehicle?

Ref:

- h) The driver wishes to stop overnight at a motel. Does the vehicle need to be supervised?

Ref

Case Study 2

An Irish manufacturer has ordered 20,000 L of 60% Sulphuric acid solution to be delivered in bulk from a supplier in the Netherlands

- a) Select an appropriate UN number, proper shipping name and packing group for this delivery?

Ref

- b) The customer's is only set up to unload tankers from the bottom. Explain how this would influence the choice between using a UN portable tank container or a fixed ADR road tanker for the delivery

Ref

- c) What formula should be used to determine the maximum degree of filling of the tank?

Ref

- d) What is the interval between periodic tests for this tank?

Ref:

- e) What plates and placards must be displayed on the transport unit? Provide all relevant details and explanations

Ref:

- f) i) Indicate how the goods should be described on the transport document

ii) What languages are required on the document

iii) When empty the tank vehicle is returning to the consignor. How would you provide a transport document for the return journey?

Ref:

g) Prior to shipping the bulk material, the customer requires a 1L sample to verify that it meets their purity specifications. How would you package mark and label the sample?

Ref:

h) i) As the driver exits Dublin port, he sees a tunnel sign indicating that he is approaching a category C tunnel. Can he proceed and enter the tunnel or must he use the alternative route?

ii) During a roadside inspection at the entrance to the tunnel it is found that there is insufficient fire extinguishant capacity on board the vehicle. What is the fixed penalty for such an offence and who is liable?

iii) When asked for Instructions in writing the driver, who is Romanian presents, a copy in Romanian only. Is this acceptable?

Yes, they are in the language of the driver.

Ref:

Case Study 3

A road haulier is asked to transport 7,200 kg of 2-amino-4-chlorophenol in fibre drums from a chemical supplier in Denmark to a customer in Italy. The supplier also wishes to ship 4 x 1 L samples of phosphoric acid solution to a separate customer on the same industrial site to check if it meets their specification for use in the manufacture of soft drinks.

a) What are the UN numbers and class of the two substances?

Ref:

b) The 4 X1L phosphoric acid samples are packed in a fibreboard box. How should this package be marked and labelled? Justify your answer.

Ref:

c) i) Illustrate how the goods should be identified on a transport document

ii) What language(s) should be used on the transport document?

iii) How long is the carrier required to retain a copy of the transport document?

Ref:

d) Considering its intended use, what precautions should be taken when stowing the phosphoric acid solution on board the vehicle?

Ref:

- e) The driver needs to stop overnight to comply with his driving hours limits. What are his options as regards leaving the vehicle unattended? A secure depot or the supervised vehicle park is not available. Explain your answer.

Ref:

- f) As he approaches Italy, the driver wishes to use one of the tunnels through the Alps which is categorised D. Can he use this tunnel?

Ref:

- g) i) Name two items of general equipment that must be on board for protection of the vehicle crew?

ii) Name an additional item of equipment that is required considering the nature of the load

Ref:

- h) When the 2-amino-4-chlorophenol is unloaded the driver notices a small spillage on the floor of the vehicle. What should he do?

Ref:

- i) i) How should the vehicle be plated and placarded when carrying all the goods?

ii) What should the driver do with the orange plates when the toxic substance is unloaded and he is proceeding to deliver the phosphoric acid samples?

Ref: