

TEST ANSWERS: BENZENE

The *BSO Plus Safety Topic* is a review designed from the BSO Plus agenda. This safety topic is your way to stay current on the safety information over the 3 years between BSO Plus and BSR.

1. Which of the following is a property of benzene?

- a. Heavier than air
- b. Sour odour
- c. Non-flammable
- d. Evaporates slowly

RATIONALE: Benzene is a colourless or light-yellow liquid at room temperature, it has a sweet odour, and is highly flammable. The vapour, which evaporates very quickly off the liquid form of this hazard, is 2.5 times heavier than air and may collect in low-lying areas.

2. Benzene is not frequently found on local plant sites.

- a. True
- b. False

RATIONALE: Benzene can be found on many local plant sites as it is an important component of gasoline, it is often held in pipelines or full tanks. It is frequently present as it is being shipped, in large quantities, by trucks, rail, and boats.

3. Short-term exposures to benzene may result in:

- a. Headache or nausea
- b. Dizziness or confusion
- c. Unconsciousness
- d. All of the above

RATIONALE: Short-term exposures to benzene can irritate the nose and throat. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. A severe exposure can cause unconsciousness. Long-term exposure affects the bone marrow's ability to produce red blood cells, leading to anemia and a depressed immune system.

4. Unhealthy exposures to benzene happen only when the benzene is in the form of a vapour:

- a. True
- b. False

RATIONALE: The most common exposure to benzene is through inhalation of the vapour, followed by absorption of the liquid through the skin.

5. Engineering controls for benzene include: (Circle all that apply)

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| a. Process enclosure |
| b. Double mechanical pump seals |
| c. Non-sparking ventilation systems |
| d. Explosion-proof equipment |

RATIONALE: Workers can protect themselves from benzene exposures through the use of engineering controls and proper PPE, including wearing: chemical safety goggles and face shield when contact is possible, chemical protective clothing e.g. gloves, aprons, boots, and proper respiratory protection.