TOOLBOX TALK AWARENESS PACKAGES

HAZ-BNZ · Benzene Awareness

Product Overview

Audience: Workers and supervisors who handle fuels or work in petrochemicals, refineries, terminals, tank cleaning or fuel system maintenance · Duration: 20–30 minutes

Version 1.0 · 22 November 2026

For anyone who handles fuels or works in petrochemicals or on tanks: where benzene is found, why it can cause cancer, controlling vapour, protecting skin, and never using petrol as a cleaner.

Benzene is a chemical found in crude oil, petrol and some other fuels, and used to make other chemicals. At work it is found at refineries, petrochemical plants, fuel terminals and service stations, and in tank cleaning, fuel system repairs and some laboratories. It gets into the body mainly by breathing in its vapour, and it can also pass through the skin. Breathing high levels can cause dizziness and headaches, and repeated exposure over time can harm the blood and bone marrow. Benzene is a known cause of cancer, including leukaemia.

This talk covers where benzene is found, how it gets in, what it can do to health, and the controls: closed systems and vapour recovery, ventilation and extraction, gas testing before tank work, the gloves and respirators the SDS and procedure require, and never using petrol to clean hands, parts or tools. It is awareness, not training in tank entry, gas testing or respirator fitting.

Learning outcomes

By the end of the session participants will be able to:

- Name where benzene is found at work, from fuels and petrochemicals to tank cleaning and fuel system repairs
- Explain how benzene gets in: breathing in vapour, and through the skin
- Explain what benzene can do to health, including that it is a known cause of cancer
- Explain the controls, starting with closed systems and keeping vapour out of the air you breathe
- Protect your skin, and never use petrol to clean hands, parts or tools
- Act on spills, strong vapour and symptoms, take part in health monitoring where it applies, and report problems

What it covers

Module	Covers
Why it matters	Where benzene is found; How it gets in; What it does to health
Controls that work	Closed systems and vapour recovery; Ventilation and gas testing; Skin protection and hygiene
Your part	Never clean with petrol; Act on spills and symptoms; Report it

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Activities

- Where is the benzene: workers find the benzene risk in four jobs, from opening a fuel tank hatch to draining a vehicle fuel system, and decide on a safer way
- What would you do: workers decide what to do in four situations, from a workmate washing their hands in petrol to a strong fuel smell inside a pump room

What is in the package

Item	File
Editable PowerPoint presentation with speaker notes, plus PDF	02_TRAINING_PRESENTATION/Training Presentation.pptx and .pdf
Facilitator guide with a running sheet, discussion prompts and model answers	03_FACILITATOR_GUIDE/Facilitator Guide.docx and .pdf
Participant handout with the key points to take away	04_PARTICIPANT_HANDOUT/Participant Handout.docx and .pdf
Attendance record form, to capture who attended, when, and who facilitated	06_RECORDS/Attendance Record.docx and .pdf
Excel attendance register	06_RECORDS/Attendance Register.xlsx
Multiple-choice theory assessment, to record understanding if your business wants to	05_ASSESSMENT/Theory Assessment.docx and .pdf
Answer key for the assessment	05_ASSESSMENT/Assessment Answer Key.docx and .pdf
Certificate template	06_RECORDS/Certificate Template.docx
Start here: Read Me First, Product Overview, Permitted Use Terms, Version Information	01_START_HERE/ (four PDFs)

What you need to deliver it

- A facilitator such as a supervisor, leading hand or WHS adviser who has read the facilitator guide and knows your site's arrangements for the topic
- A screen or projector, or printed slides or handouts: it works in a crib room, site office or on a video call
- Your own site procedures for the topic, to point to during the session

Questions

Does it cover tank entry and health monitoring? Only as awareness. Fuel tanks are confined spaces, and entering them needs a permit, gas testing, ventilation, a standby person and a rescue plan, with its own training. Some work with benzene needs health monitoring arranged by the business with a doctor; the talk explains what it is for. The talk quotes no exposure limits or benzene levels in fuels: check them in the SDS and with your regulator.

Can we add our own site procedures and photos? Yes. The slides, handout and guide are editable, and the facilitator guide marks the places to add your own procedures, contacts and photos of your workplace.

Do we have to use the assessment? No. It is there if your business wants a record that each worker understood the key points. The attendance record on its own shows who attended and when.

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TOOLBOX TALK

Benzene Awareness

Fuels, vapour and your skin: where benzene is found, and how to keep it out

20–30 minutes · Workers and supervisors who handle fuels or work in petrochemicals, refineries, terminals, tank cleaning or fuel system maintenance

[Company name] · [Date] · [Facilitator name]

BNZ

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What this talk is, and is not

This talk covers

- ✓ Where benzene is found
- ✓ How it gets in, and what it does
- ✓ The controls for vapour and skin
- ✓ Spills, symptoms and reporting

This talk is not

- ✗ Tank or confined space entry training
- ✗ Gas testing training
- ✗ Respirator fit training
- ✗ Our procedure: **[Our fuel handling procedure]**

Awareness only. Tank entry, gas testing and respirator use need specific training, permits and equipment.

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Where benzene is found

Benzene is in crude oil and petrol, and is used to make other chemicals.

- Refineries, petrochemical plants and terminals
- Fuel tankers, loading and unloading
- Cleaning and repairing fuel tanks
- Fuel system repairs on vehicles and plant
- Some laboratories and chemical works

A composite example

- A mechanic drains a car's fuel tank into an open bucket in a closed workshop, then washes his hands in the petrol.
- He does it most weeks. He gets headaches by the end of the day.

Where there is petrol or crude oil, there is benzene.

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Duties under health and safety laws

The business must

- Identify where benzene may be
- Keep vapour in closed systems
- Provide ventilation and the right PPE
- Arrange health monitoring where required

You must

- Follow the fuel handling procedure
- Use the controls and wear the PPE
- Never clean with petrol
- Report spills, leaks and symptoms

Most health and safety laws give these duties. Check the law where you work (in Australia, WHS or OHS laws).

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The order of controls for benzene

1 **Elimination** Do the job without opening the system

2 **Substitution** Safer solvents and cleaners in place of petrol

3 **Isolation** Closed systems, vapour recovery, sealed containers

4 **Engineering** Local extraction and ventilation; fuel drainers

5 **Administrative** Procedures, permits, gas testing, health monitoring

6 **PPE** The gloves and respirator the SDS and procedure require

HIGHER ORDER

Higher order controls remove or control the hazard at the source, or put a barrier between people and the hazard.

LOWER ORDER

Lower order controls rely on people to do a thing or wear a thing, every time, tired, distracted or rushed.

Behaviours are not on the hierarchy, but behaviours and culture decide whether every control on it actually works.

Petrol is a fuel, not a cleaner.

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Benzene Awareness

Participant handout · keep this

Benzene is in petrol, crude oil and petrochemicals, and it can cause cancer. Keep the vapour in and off your skin. Keep this page.

The order of controls

1. Do the job without opening the system
2. Safer cleaners in place of petrol
3. Closed systems, vapour recovery, sealed containers
4. Extraction and ventilation; fuel drainers
5. Procedures, permits, gas testing, monitoring
6. The gloves and respirator the SDS requires

What it can do

- Dizziness, headaches, irritation
- Harm to blood; a known cause of cancer

Never

- Clean hands, parts or tools with petrol
- Siphon fuel by mouth

Before you start

- ☐ Could this job release fuel vapour or benzene?
- ☐ Is the system closed, or the vapour recovered or extracted?
- ☐ Am I wearing the gloves the SDS names?
- ☐ Does tank work have a permit and gas testing?
- ☐ Do I know the spill procedure and who to tell?

Spill or symptoms

- Move away upwind; warn others
- Fresh air; soap and water; call your local emergency number (000 in Australia) if needed

Who and where

- **[Our fuel handling procedure]**
- **[Who to report to here]**

Keep the vapour in and off your skin. Never use petrol as a cleaner.

This is awareness training. It is not a licence, a ticket, a permit or a competency. It is not tank entry, gas testing or respirator fit training.

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