TOOLBOX TALK AWARENESS PACKAGES

HAZ-HOT · Hot Work Awareness

Product Overview

Audience: Workers who weld, cut, grind or braze, and those who work near them · Duration: 20–30 minutes

Version 1.0 · 8 November 2026

For workers who weld, cut, grind or braze, and the people around them: how hot work starts fires and explosions, and the permit, fire watch and fume controls.

Hot work produces sparks, slag, heat and flame that can travel further than people expect and smoulder for a long time before a fire breaks out. Hot work on or near containers that have held flammable substances can cause explosions. Welding fume is also a serious health hazard.

This talk covers the hot work permit, removing or protecting combustibles, fire watch during and after the work, gas cylinder safety, fume and ventilation, and why tanks and drums are never worked on without being made safe first.

Learning outcomes

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

- Explain how hot work causes fires and explosions, including sparks travelling and smouldering fires
- Describe the hot work permit and the checks it requires before work starts
- Remove or protect combustible materials, and cover openings that sparks could pass through
- Explain the role of the fire watch during and after hot work
- Store and handle gas cylinders safely, including flashback arrestors and checking for leaks
- Describe the health effects of welding fume and the ventilation and protective equipment that control it
- Explain why containers that have held flammable substances must be made safe and certified before hot work

What it covers

Module	Covers
Fire and explosion	How hot work starts fires; Smouldering fires after work stops; Containers and explosive atmospheres
Before the work	The hot work permit; Clearing and protecting combustibles; Fire extinguishers on hand
During and after	Fire watch; Gas cylinders; Fume, ventilation and PPE

Activities

- Permit check: workers review a completed hot work permit and find what is missing

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- Where do the sparks go: workers mark the area that needs clearing for a workshop job (a photo or a described scene)

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 this teach welding? No. It covers the fire, explosion and fume risks of hot work and the controls around it. It does not teach welding or cutting skills.

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

Hot Work Awareness

How hot work starts fires and explosions, and the permit, fire watch and fume controls

20–30 minutes · Workers who weld, cut, grind or braze, and those who work near them

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

HOT

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What this talk is, and is not

This talk covers

- ✓ How hot work starts fires and explosions
- ✓ The hot work permit and clearing combustibles
- ✓ Fire watch; gas cylinders; welding fume
- ✓ Containers that must be made safe first

This talk is not

- ✕ Welding, cutting or grinding training
- ✕ Training to issue hot work permits
- ✕ Training to make containers safe
- ✕ Our procedure: **[Your hot work procedure]**

Awareness only. It does not teach welding or cutting skills. Hot work in a confined space needs further permits and training.

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How hot work starts fires

Hot work produces sparks, slag, heat and flame that travel further than people expect.

- Sparks and slag travel many metres, further when working at height
- They fall through gaps, floor openings, drains and wall cavities
- They can smoulder in dust, insulation, timber or rags for a long time
- Heat conducts through metal to start fires on the other side of a wall

A composite example

- A fitter cuts a bracket off a steel wall late on a Friday. The area around him is clear.
- Sparks drop through a gap into the storeroom next door. A fire breaks out after everyone has gone home.

The fire often starts after the work stops.

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The hazards of hot work

SPARKS AND SLAG

Fire

Combustibles nearby ignite: dust, packaging, timber, rags, insulation, fuel.

HOURS LATER

Smouldering

Hidden embers in cavities, dust or insulation flare up after everyone has gone.

CONTAINERS AND VAPOURS

Explosion

Drums and tanks that held fuel or solvent, and flammable vapours or dust in the air.

HEALTH

Fume and light

Welding fume can cause cancer and lung disease. The arc's light burns eyes and skin.

Plan for all four before the first spark.

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Duties under WHS or OHS laws

The business must

- Manage the fire, explosion and fume risks of hot work
- Control ignition sources near flammable materials
- Provide permits, fire equipment, ventilation and training
- Keep welding fume exposure as low as reasonably practicable

You must

- Have a permit where required before you start
- Clear or protect combustibles, and keep the fire watch
- Use the ventilation and protective equipment provided
- Stop and report when the controls are not in place

Most of Australia has harmonised WHS laws; Victoria's OHS laws take a different form. Exposure standards for welding fume are changing: check the current limit.

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Hot Work Awareness

Participant handout · keep this

Hot work starts fires and explosions, often after the work has stopped, and welding fume is a cancer risk. Keep this page.

Before the first spark

- ☐ A hot work permit where needed: **[When a permit is needed here]**
- ☐ Combustibles moved out of the area, or covered
- ☐ Gaps, openings and drains covered
- ☐ Other side of walls and floors checked
- ☐ No flammable vapours; gas tested where needed
- ☐ Extinguisher on hand; fire watch named

Fire watch

- Only job: watch for fire
- Extinguisher ready; can raise the alarm
- Keeps watching after work stops, for the time the permit sets
- Checks above, below and behind

Gas cylinders

- Upright, secured, away from heat
- Flashback arrestors on oxygen and fuel gas lines
- Leak check with solution, never a flame
- Never use oxygen to blow off dust

Containers and fume

- A drum or tank that held a flammable substance is not touched until certified safe
- Use fume extraction at the source, and ventilation
- A respirator where extraction is not enough

Stop and report when

- A permit check is not done
- A container is not certified
- You smell smoke or see smouldering
- Report to: **[Who to report to here]**

Permit, clear, watch, and keep watching after the sparks stop.

This is awareness training. It is not a licence, a ticket, a permit or a competency. It does not teach welding or cutting, or authorise you to issue hot work permits or certify containers.

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