

Drum explosion sparks warning

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A fireball that burned a man in an Adelaide workshop has prompted a SafeWork SA warning about the dangers of modifying storage drums.

The worker was attempting to tack weld a metal thread ring on an oil drum after cleaning the drum with brake fluid to remove impurities on 17 March.

Fumes were still present in the drum and when the weld started it sparked a fireball that engulfed the worker's head and shoulders as he leaned over the drum

The man was taken to the Royal Adelaide Hospital burns unit for treatment.

SafeWork SA is making inquiries and warns anyone who plans to modify a storage drum to first stop and think.

The incident follows a similar occurrence on a farm outside Cowell last year when a worker sustained serious burns while cutting into a steel drum using oxy-acetylene equipment.

Even drums that have been empty for a very long time can contain enough residual substance to explode and/or emit hazardous vapour when exposed to heat.

Rinsing drums with water or other cleaning fluids does not guarantee vapours are purged.

Safety checklist

Before reusing a drum, check what the drum has been used for:

- Did the drum contain a flammable or combustible liquid, or gas?

- Did the drum contain a hazardous chemical?
- Is there a hazard diamond on the label of the drum?

If the answer to any of these questions is 'yes' or is 'unknown', **do not apply heat to the drum.**

Keep the drum away from oxyacetylene torches, naked flames or sparks from grinding and welding equipment.

Assess the storage drum before starting work

Before making that first cut, check if the container was used to store flammable liquid or gas. Look for the hazard diamond symbol.

Do not cut into any drum that:

- includes the hazard diamond symbol
- has contained flammable or combustible liquids
- where the contents of the drum or container are unknown.

If there is no alternative but to cut into the container, check:

- the Safety Data Sheet and the manufacturer's instructions and precautions before performing any work on the container
- the container has been properly cleaned and certified vapour-free by a competent person
- that there are safe work processes in place to manage the hazard and ensure all workers understand and are properly trained on these processes
- there are no ignition sources near the cutting area
- controls are in place to extinguish any flames that may eventuate.

Working with or near storage drums

Before conducting any hazardous work, always provide proper training and supervision to workers so they understand the hazards and risks associated with the task.

Never weld, grind or do any other hot work activity near empty drums. Do not use drums as a welding or work platform.

Store empty drums with bungs removed in a well-ventilated place away from other work areas.

Removing the bung will not guarantee all hazardous residues and vapours have been naturally vented.

Do not cut or apply heat to these drums.



SafeWork SA

<https://www.safework.sa.gov.au/news-and-alerts/safety-alerts/incident-alerts/2023/drum-explosion-sparks-warning>

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