

BULLETIN

Hazards of Cutting Empty Drums

Bulletins provide Regulator guidance on how compliance with the [Work Health and Safety \(National Uniform Legislation\) Act](#) and [Regulations](#) (WHS Act and Regulations) may be achieved as they provide specific information about work health and safety duties. This bulletin highlights the hazards and outlines some considerations that may prove to be of assistance when cutting empty drums.

Introduction

Cutting the top off or welding any drum should be considered dangerous; it is often unclear what has been in an empty drum.

Empty steel drums that have previously contained flammable materials can constitute an explosion or fire hazard many years after being emptied. A risk assessment should always be undertaken prior to grinding, cutting or welding drums.

Sparks or heat from the cutting tool may cause explosions both immediately or delayed. The act of opening a cut in a drum may allow air to seep in slowly, gradually creating an explosive mix with the chemical inside. Therefore, several minutes may elapse while the drum is being cut before the air/fuel mixture becomes explosive.

The danger of “Hot Work” operations is not limited to containers that have held volatile liquids, such as petrol. Any combustible material, whether volatile or not, can give off mist, vapours or fumes that can be explosive.

Safety hints

- Never cut the tops off drums that have contained flammable liquids or flammable gases without a thorough assessment of hazards and associated risks involved;
- Application of heat to drums that have held chemicals may produce poisonous gas and cause serious harm to your health;
- Store empty drums in a well-ventilated place away from work areas preferably with bungs removed;
- Avoid welding or grinding near any empty drums – SPARKS FLY;
- Do not use drums as welding platforms – construct a proper trestle;
- Correctly label drums on site.

Before cutting or grinding – STOP AND THINK!

What has the drum been used for?

- Was it flammable liquid or gas?
- Was it a chemical?
- Is there a hazard diamond on the label?

If there is any doubt as to what the empty drum used to contain, it should be assumed that its contents was of a flammable and/or volatile nature and treated as such.

Before applying heat to a drum some considerations include:

- Remove all possible sources of ignition from the area (flames, mechanical sparks, electrical sparks etc);
- Remove all flammable substances and combustible materials from the area;
- Remove all caps and stoppers from the drum;

- Purge the drum (see below);
- Wear appropriate PPE.

Purging methods

Below are some suggestions of effective methods that may prove to be of assistance when conducting the purging of drums:

- Fill the drum completely with water (but remember that water may not remove all residues and solids).
- Fill the drum with an inert gas such as nitrogen.
- Purge the drum with steam.

For further information please contact NT WorkSafe on 1800 019 115 or go to www.worksafe.nt.gov.au