

SAFETY ALERT

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epar®

GRINDERS, HYDROCARBONS, EXPLOSIONS AND PPE

ALERT

GOLF COURSE MECHANIC SERIOUSLY INJURED IN WORKSHOP EXPLOSION

Yesterday, when cutting a 205-litre drum with a grinder, a mechanic suffered serious burn injuries when hydrocarbon vapours exploded.

The mechanic believed he had purged the drum. However, sparks or heat from a cutting tool can cause explosions both immediately and 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. In this incident it did, and the mechanic suffered serious burns to his face and head.



PPE

Luckily, he was wearing goggles and earmuffs. This saved his eyes and ears from serious injury.

INCIDENT RESPONSE

He was immediately placed in the nearby emergency shower where he remained until paramedics arrived.

The shower cooled the injured area with water and limited the extent and severity of the burn.

The danger of hot work operations is not limited to containers that have held volatile liquids. Any combustible material, whether volatile or not, can give off mist, vapours or fumes that can be explosive.

SAFETY HINTS

- Before cutting or grinding - STOP AND THINK.
- What has the drum been used for?
- Was it flammable liquid or gas or was it a chemical?
- Is there a hazard diamond on the drum?
- If there is any doubt as to what the empty drum used to contain, it should be assumed that its contents were of a flammable and/or volatile nature and treated as such.
- Never cut the tops off drums that have contained flammable liquids or flammable gases without a thorough assessment of hazards and associated risks involved. Do your epar Take 3 Risk Assessment.
- 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.

DOCUMENTATION AND TRAINING

Take Action

- ✓ Issue the epar Take 3 Risk Books to your staff.
- ✓ Implement the epar Safe Work Procedure for the Use of Grinders.
- ✓ Implement the epar Hot Work Procedures.
- ✓ Verify the Competency of staff to use spark emitting tools and equipment.
- ✓ Use the epar Emergency Shower Audit Protocol to check your Emergency Shower compliance.
- ✓ Deliver the epar Stand-Up Talk on PPE to all staff.
- ✓ Use the epar Safe Act Observation document to ensure staff are wearing PPE and undertaking tasks safely.