

Preventing fire and explosion risks when operating rotational moulders

What is the problem?

Workers operating rotational moulders being exposed to fire and explosion risks from polyethylene powder.

What are the risks?

Workers can be killed or seriously injured if polyethylene powder ignites.

Polyethylene powder located on surfaces can be ignited, creating a fire and potential source of further ignition.

Moulds not tightly clamped together can leak powder when rotated, creating fuel for fire. The air gap can also let sparks access the interior of the mould, creating a high risk of explosion.

An explosion occurred inside a mould that was filled with polyethylene powder and placed in a gas-fired oven.

What is a solution to the problem?

Put in place risk control measures to eliminate or minimise risks by:

- ensuring moulds are tightly clamped and a breather tube is fitted with a filter
- conducting a pre-rotational inspection to check each assembled mould does not leak
- checking for dust and cleaning oven/moulding surfaces
- regularly inspecting and testing the safety system, and servicing the moulder regularly
- using an appropriate breather (pressure relief) tube fitted with a non-combustible porous filter (eg fibreglass). Note: steel wool creates a risk of fire/explosion and should not be used
- placing signs on or near the machine to alert employees of the dangers of operating the machine
- providing workers with instructions and training on safe work procedures, and regularly reviewing them
- providing workers with personal protective equipment (PPE) such as gloves, safety glasses and hearing protection.

Further Information

WorkSafe Advisory Service

Toll-free: 1800 136 089

Email: info@worksafe.vic.gov.au

worksafe.vic.gov.au