

# Low-slope roofing—Hot asphalt

## Explain dangers

Roofing asphalt is a petroleum-based product. It is not a single chemical, but a mixture containing many different chemicals.

During roofing projects, asphalt is heated in roofing kettles. This process can produce vapour emissions and odours from the sulfur compound.

Roofers who are exposed to this may experience:

- Headaches and nausea
- Eye, nose, throat, and skin irritation
- Fatigue and drowsiness
- Severe burns.

## Identify controls

### BEFORE WORK BEGINS

- Check that a risk assessment for asphalt work has been done. Follow up daily with the risk assessment to make sure proper precautions are being taken.
- Place kettle in a location that will lessen the exposure of the operator and workers to fumes. Keep the kettle away from air intakes, doors, and windows.
- Discuss with the building owner whether air intake systems should be turned off and air intake vents should be closed or covered.
- If possible, use roofing equipment with lids.
- Any worker who will use or handle propane must hold a record of training (ROT) for that purpose recognized by the Technical Standards and Safety Association (TSSA). Tar kettle operators require an RE-O ROT. Torch operators require a CH-02T ROT.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Workers must wear or use the PPE prescribed by law. When working with a roofing kettle, PPE must include eye protection, a face shield, and gloves to protect hands and arms.
- Workers should cover exposed skin by wearing gloves, long sleeves, and pants.
- Workers should have access to respiratory protection upon request.

## SAFE WORK PRACTICES

- Follow all manufacturers' recommendations and procedures for asphalt usage.
- Have an emergency plan in place and learn the roof's escape routes.
- Keep flammable material, gases, and/or liquids away from heat sources.
- Have at least one fully-charged 4A40BC-rated fire extinguisher near workers (within 20 ft).
- Have at least one first aid attendant with a heat/burn treatment kit available.
- Make sure that the kettle operator is a competent worker who has a valid RE-O ROT.
- Make sure that the kettle is in good operating condition before use. Report any defects to the foreperson or superintendent.
- Set the kettle on firm, level ground to avoid spilling or tipping.
- Place barriers and signs around the kettle to keep people at a safe distance.
- Make sure the kettle wheels are fully inflated and blocked to prevent rolling.
- Ensure that the areas around kettles, tankers, and propane cylinders are well ventilated.
- Keep propane cylinders at least 3 m (10 ft) away from sources of flame or ignition.
- Using a hand-held thermometer, ensure that the working temperature of asphalt is 190° to 218°C. Never heat it above the flash point for bitumen or rubberized asphalt (260°/274°C).
- When filling felt machines, mini-mops, and buckets:
  - Check pipe couplings and filling lines for damage or leaks.
  - Ensure pipes are supported and are also braced at every 90° joint.
  - Stand upwind of filling lines.
  - Be aware that moisture in pipes and equipment may cause material to pop and splatter when heated.

## Demonstrate

Show your crew the safety data sheet (SDS) of the asphalt work material you will be using and review the procedures for safe handling and first aid.