

COAL TAR ROOFING - REMOVAL

Introduction:

This information is mainly intended for Project Managers, Facilities Managers and Operation Supervisors. The procedure recommends precautions roofers should use to minimize their exposure to coal-tar roofing dust, when removing a coal-tar pitch or bitumen roof.

Health Effects:

Studies have shown that coal-tar derived roofing pitch and dust from old coal-tar pitch roofs may produce the following acute symptoms:

- skin and lip irritation which range from a burning sensation to extensive acne,
- eye irritation ranging from slight burning or grittiness and tearing to swelling of the eyelids and disturbance of vision,
- irritation of the nose and throat and
- nausea and abdominal pain.

Roofers are also known to have an excessive incidence of cancer. Elevated levels of skin, lung, lip and throat cancers have been noted in medical studies. The increase in lung cancer mortality is evident only after 20 or more years of roofing.

Coal-tar bitumen products are less likely to cause acute symptoms, but retains carcinogenicity.

Legislation:

The Alberta Occupational Health and Safety Act, Chemical Hazards Regulations, states:

The 8 hour occupational exposure limit (O.E.L.) for coal dust is 4 mg/m³ (milligrams of coal dust per cubic metre of air).

Air test studies have shown that dust can range between 2.1 and 13.1 mg/m³ during roofing removal, if dust suppression techniques are not used.

If dust suppression techniques are not used when removing coal tar roofing, the roofing companies should register "exposed" workers with the Director of Medical Services, Alberta Labour - Occupational Health and Safety Division.

The definition of an exposed worker is:

A worker who may reasonably be expected to be exposed to levels of coal tar roofing dust in excess of the O.E.L. during at least 30 work days in a 12-month period.

Contact the nearest AOH & S regional office to discuss.

Suggested Work Procedure:

1. Remove the coal-tar roofing using dust suppression techniques. These techniques include wet vacuuming or light wetting of the roofing during its removal.
2. Roofers should avoid contact with the roofing dust and, if possible, they should work upwind from roofing removal operations.
3. If coal tar or dust contact does occur to skin and eyes, the affected area should be washed with mild soap and warm water. Also, wash hands and face with mild soap and warm water before eating, drinking or smoking.
4. If dust suppression techniques or other work activities may result in coal-tar dust levels exceeding the occupational exposure limits, protect the skin and eyes as follows:
 - a) Wear impervious gloves, close fitting disposable or cloth coveralls, transparent tinted face shield or rubber framed safety goggles, safety footwear, and NIOSH/MSHA approved respirator for organic vapours and dust.
 - b) Contact lenses should not be worn.
 - c) After the work shift or during breaks, remove and wet clean the faceshield or goggles, footwear and respirator of dust.
 - d) Remove disposable or cloth coveralls and gloves. If cloth coveralls or gloves have been used, place them in a plastic bag and wash prior to reuse. Disposable coveralls and gloves should be replaced for every work shift.
 - e) It is recommended that workers shower after each work shift.

Roofing Assistance:

The Building Envelope Section of APWSS - Building Sciences Branch can be contacted to determine if your roof contains coal-tar pitch or bitumen. Contact Barrie Dennis at 422-7420 for assistance.

The Architectural Sciences Group has developed the suggested work procedure and can provide for inclusion in any contract documents used for reroofing or demolition of APWSS buildings.

Contact Tim Leung at 422-7440 or Colin Wildgrube at 422-7472.