



SAFE HANDLING OF BITUMEN

The purpose of this safe handling card is to give brief general advice on best practice on safely handling of bitumen. Any controls and means of protection must be based on local site specific risk assessments, e.g. laboratory activities, operations etc.

- Paving bitumens (including polymer modified bitumen) are supplied and stored as hot liquids at temperatures up to 200°C.
- Industrial bitumens are supplied and stored at temperatures up to 230°C.

PRINCIPAL HAZARDS AND RISKS

- Severe thermal burns (up to third degree) and shock.
- Fire and explosion. If bitumen is over-heated flammable decomposition products may be formed resulting in a fire or explosion hazard.
- Boil-over of tanks due to the presence of water.
- Fumes. Respiratory problems or nausea may be induced by high concentrations of fumes from hot bitumen.
- Hydrogen Sulphide. In confined spaces hydrogen sulphide may accumulate and may reach hazardous levels.
- Pyrophoric deposits may develop in bitumen tanks which may self-ignite.

GENERAL SAFETY ADVICE

- Storage temperatures should not exceed 200°C for paving bitumens and 230°C for industrial bitumens. Bitumens should be kept at least 30°C below flash point, or national limits whichever is the lower.
- Heat-resistant hoses free from twists, kinks, damage and supported along their length should be used. They should be clean, dry and free from plugs of solid bitumen.
- Do not use steam to empty pipelines or hoses, to avoid water in the system. Use suction pumps, compressed dry air or blanket gas.

PERSONAL SAFETY MEASURES

Protective clothing to be considered includes:



- Head protection: helmet, preferably fitted with chin strap, neck apron, full visor to protect the face.
Note: Goggles only protect eyes



- Heat-resistant gloves with long sleeves.



- Coverall, legs to be worn over boots. 100% cotton fire retardant (Proban® or similarly treated), preferably with high visibility markings.



- Safety boots that can be removed easily.

Note: Additional site specific equipment may be required: safety spectacles / goggles, ear defenders, rigger style boots or similar, anti-static clothing etc.

FIRST AID



- Bitumen burns should be cooled for at least 15 minutes, first with cool water to reduce pain, then with warm water to prevent hypothermia if the burned surface is larger than the size of a hand.

- Burns to the eyes should be irrigated for at least 5 minutes.

• NO ATTEMPT SHOULD BE MADE TO REMOVE THE BITUMEN AT THE WORKSITE.

- Measures to remove the Bitumen layer from the skin should be taken as soon as possible under the supervision of a doctor, or at a hospital.



- Careless removal of the bitumen may result in the skin being damaged further, bringing with it the risk of infection and the possibility of complications.

- Respiratory problems due to excess fume exposure: Under safe conditions remove person from contaminated atmosphere into fresh air. Seek medical assistance if breathing remains difficult. Apply emergency first aid measures.

BITUMEN FIRE



- Call the fire brigade immediately.
- Switch off all electrical power to heaters, circulation pumps, etc.
- Close valves if safe to do so in order to limit the spread of fire.
- Attempt to extinguish fire by using dry chemical powder, foam, inert gas, or water spray (fog).

Never use water jets.

TELEPHONE NUMBERS:

FIRE DEPARTMENT

AMBULANCE

PRODUCT EXPERT

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