

SAFE HANDLING OF BITUMEN

Paving grade bitumens (including polymer modified bitumens) are supplied and stored as hot liquids at temperatures between 150 and 200°C.

Industrial bitumens are supplied and stored at temperatures up to 230°C.

PRINCIPAL HAZARDS

- Severe thermal burns (up to third degree).
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.

SAFETY MEASURES

- Storage temperatures should not exceed 200°C for paving grades and 230°C for industrial grades, or 30°C below flash point or national limits whichever is the lower.
- Protective clothing should be worn, including:



Head protection: helmet, neck apron



Safety boots



Visor to protect the face
(goggles only protect eyes)



Coveralls (with legs worn over boots)



Heat-resistant gloves with cuffs worn inside coverall sleeves. If long sleeved gloves are used, they may be worn outside the coveralls only if they fit tightly below the elbow.

- 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 or compressed air or blanket gas.

FIRST AID



- Burns from hot bitumen:
Remove heat by immediately drenching the affected part by running water:
 treat eyes for at least 5 minutes
 treat skin for at least 10 minutes
After cooling, no attempt should be made to remove bitumen adhering to the skin since it forms a sterile protective layer on the burnt area. Usually the bitumen layer detaches itself after a few days.

If for any reason the bitumen must be removed, this can be done using a lightly warmed medicinal liquid paraffin.

Seek medical assistance or hospitalization in all cases of serious burns.

- 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 waterjets.

TELEPHONE NUMBERS

FIRE BRIGADE

AMBULANCE

PRODUCT EXPERTS



european bitumen association
info@eurobitume.eu