

# Emergency Safety Showers

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## Introduction

- A working emergency shower to cool the affected area is the best immediate first aid for the majority of bitumen burns casualties.
- The quicker the casualty receives first aid treatment the less likely there will be permanent damage to the skin.
- If the bitumen completely encircles a body part, split or soften the bitumen to avoid the tourniquet effect. (see the Eurobitume Bitumen Burns Card).
- Leave the bitumen in place.
- Seek urgent medical attention.



## What we know

- When a bitumen burn has occurred, the affected area should be cooled as quickly as possible to prevent further damage. Follow the advice in the Bitumen Burns Card.
- The burn should be continuously drenched in water for at least 15 minutes for a skin burn and 5 minutes for the eyes.
- However, body hypothermia must be avoided.



## What the Guidance Says

- The location of the shower should be clearly indicated and between 6 – 20 metres from the discharge point.
- If the emergency shower is within 6 metres of the discharge point it must be screened from a potential bitumen spray.
- Precautions must be taken to protect the shower from freezing. An alternative water source must be provided if the shower is inoperative.
- Advice on the treatment of bitumen burns must be displayed in the delivery area.
- If hospital treatment is required the casualty should take a copy of the Eurobitume Bitumen Burns Card with them.



# The Eurobitume Bitumen Burns Card



## BITUMEN BURNS

### INFORMATION NOTE FOR FIRST AID AND MEDICAL PERSONNEL

**All persons working with hot bitumen should be familiar with these recommendations in order to administer first aid to burn victims.**

**This document should accompany the patient and be placed in a prominent position before transport to a Doctor or Hospital.**

#### 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**

#### MEDICAL CARE

*(if in doubt do not hesitate to contact a burns centre)*

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. However, this treatment should be carried out with caution because 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.

Initially it is not important to know whether the burn is superficial or deep. The priority should be to remove the bitumen without causing further damage.



## BITUMEN BURNS

### REMOVAL OF BITUMEN ADHERING TO THE BURNED AREAS

Different methods can be recommended:

- The bitumen layer should be left in place and covered with thick gauze containing paraffin or a paraffin-based antibiotic cream, e.g. Flammazine (silver sulphadiazine). Such treatment will have the effect of softening the bitumen, enabling it to be gently removed after a few days.
- Alternatively, olive oil (new bottle) should be applied and left to soak the affected areas for a few hours. Thereafter the bitumen can be removed by rubbing gently with some gauze. Any remaining bitumen can be removed by wrapping the affected areas with gauze soaked in olive oil. The dressing should be changed every 4 hours. After 24 hours any remaining bitumen can be removed and the burn may be disinfected and treated conventionally.

### CIRCUMFERENTIAL BURNS WITH TOURNIQUET EFFECT

When bitumen completely encircles a limb, or other body part, the cooled and hardened bitumen may cause a tourniquet effect due to oedema (swelling) in the burn. In the event of this occurring the bitumen must be softened as soon as possible and/or split to prevent restriction of blood flow.

### EYE BURNS

No attempt should be made to remove the bitumen by unqualified personnel. The patient should be referred urgently to an ophthalmologist or hospital with an ophthalmology unit for diagnosis and appropriate treatment.

Eurobitume has made considerable efforts to compile this publication on the basis of reliable sources. More specifically this publication was established with the assistance of Professor Stan Monstrey, Head of Burns Unit of the Academy Hospital of Ghent (Belgium) and Jean-Pierre Arnaud, Chief Executive officer of the Belgian Burns Foundation and reflects the prevailing opinions in medicine on 13/06/2013.

Neither Eurobitume nor any company participating in Eurobitume can accept liability for any loss, damage or injury whatsoever resulting from the use of this information.

Eurobitume would like to thank Professor Stan Monstrey and Jean-Pierre Arnaud for their contribution in compiling this guide.

## Best Practice

- The emergency shower **MUST**:
  - Have clear safe emergency access, together with clearly visible signs indicating its position.
  - Be easily operated by an operative in distress, e.g. a footplate.
  - Be capable of providing sustained volumes of clean water for at least 15 minutes.
  - Be subjected to a regular and documented maintenance and inspection regime (COSHH L8).
- It is recommended that the emergency shower is alarmed to ensure that site management are aware of its use.



## Bitumen Safety Documents

Guidance documents on a range of bitumen safety related subjects can be downloaded free from the Eurobitume website:

- UK Version of the 2018 Guide to Safe Delivery of Bitumen.
- Safety Showers
- Eurobitume Bitumen Burns Card
- Safety Footwear Risk Assessment for Bitumen Delivery Drivers
- Operational considerations for Hot Bitumen Storage Tanks and Off-loading Systems.
- Design and use of Ground Based Pumps (EBUK/MPA document).
- Safe Bitumen Tank Management (EBUK/MPA document).
- Returning Bitumen Storage Tanks to Service.
- Other relevant documents:
  - American National Standard for Emergency Eyewash and Shower Equipment – ANSI Z358.1-2014.
  - The Energy Institute Model Code of Safe Practice Part 11: Bitumen Safety Code

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## Other Bitumen Toolbox Talks

The following toolbox talks can be downloaded free from the Eurobitume website:

- Bitumen Delivery Driver Induction
- Bitumen Discharge Permit
- Personal Protective Equipment
- Ground Based Pumps
- Blocked/Partially Blocked Pipelines
- Trace Heating of Bitumen Pipelines
- Emergency Shutdown of Bitumen Delivery Vehicles
- 'Pocket' Guide to the Safe Delivery of Bitumen

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