

Title	IMDG Code 2016 / SUPPLEMENT / MFAG / Table 8
Effective Date	1-1-2012
Invalid from	1-1-2014
Note	Incorporating Amendment 35-10

TABLE 8

SKIN EXPOSURE TO CHEMICALS

Skin exposure to chemicals may cause local damage of either chemical burn or frost-bite. Chemical burns resemble thermal burns with redness, irritation, swelling, pain, blistering and ulceration.

The chemical may be absorbed through the skin causing general symptoms of poisoning; these symptoms may be delayed for several hours.

Limited exposure to leaking refrigerator gases, compressed gases or solid carbon dioxide (dry ice) may cause local frost-bite that, in principle, will cause the same damage as chemical or thermal burns and are treated accordingly. No special treatment instructions are needed - referred to chemical burns.

In extended burns fluid loss may be serious.

DECONTAMINATION in all cases of skin exposure, regardless of chemical or symptoms

- Chemical protective gloves and clothing should be used while washing the casualty's skin. After decontamination, it is not necessary to use protective clothing.
- Carefully remove and double-bag contaminated clothing and personal belongings. Cut off the clothes, if necessary.
- If the chemical has affected eyes **and** skin, **the eyes should have PRIOR attention**.
- **IMMEDIATE** washing with copious amounts of water for at least ten minutes while removing contaminated clothing, rings, wristwatches, etc. **Don't delay**.
- Do not use neutralizing substances.
- Remove the casualty to the ship's hospital.
- Continue washing the skin for additional ten minutes with soap or shampoo and water.

Exposure to PHOSPHORUS (WHITE OR YELLOW) which ignites in air

- Keep the injured part of the body under water or covered with wet dressings.
- Using chemical protective gloves remove the phosphorus with a clean spoon or forceps.

Exposure to HYDROFLUORIC ACID

- Using latex gloves, massage exposed area with calcium gluconate gel for at least 15 minutes or until pain is relieved. Leave the gel on the skin. The gel should be re-applied 4-6 times daily for 3-4 days if a chemical burn is present.

Further advice See Table 16

SIGNS & SYMPTOMS

Burning pain with redness and/or swelling of contaminated skin, irritating rash

TREATMENT

- After washing with water, wash exposed areas thoroughly (including skin folds, nail beds and hair) with soap or shampoo and water. Clean away from the burn in every direction. DO NOT use cotton wool for cleaning as it is likely to leave bits in the burn.
- Dab gently any remaining dirt using a swab soaked in warm water. BE GENTLE as this may cause pain.

SIGNS & SYMPTOMS

Chemical burns

TREATMENT

- Cover burns with a sterile dressing (e.g. perforated silicone dressing or vaseline gauze), overlapping the burn or scald by 5-10 cm (2 to 4 inches). Then apply a covering of absorbent material (e.g. a layer of sterile cotton wool) and a suitable bandage.

Further advice on chemical burns: See Appendix 8

SIGNS & SYMPTOMS

Blisters

TREATMENT

- Leave blisters intact.
- If blisters have burst, clip off the dead skin by using a sterilized pair of scissors. Flood area with clean, lukewarm (previously boiled) water from a clean receptacle to remove debris.
- Cover blisters with a sterile dressing (e.g. perforated silicone dressing or vaseline gauze), overlapping the burn or scald by 5-10 cm (2 to 4 inches). Then apply a covering of absorbent material (e.g. a layer of sterile cotton wool) and a suitable bandage.

SIGNS & SYMPTOMS

Pain

TREATMENT

- Give two tablets of paracetamol every six hours until the pain is relieved.

- If there is very severe pain, give 10 mg morphine sulphate and 10 mg metoclopramide intramuscularly, if advised medically.

- **SEEK MEDICAL ADVICE**

- If breakthrough pain persists after 15 minutes or more give a second injection of 10 mg morphine sulphate intramuscularly.

Further advice on pain relief: See Table 13

SIGNS & SYMPTOMS

Blisters and ulcers

TREATMENT

- Dressings should be left undisturbed for 3-4 days unless the dressing becomes smelly or very dirty, or the temperature is raised. Redress such areas as described above.
- Provide adequate relief for continuing pain (see above).

SIGNS & SYMPTOMS

Blisters, ulcers covering an area exceeding 9% of body surface (corresponding to 9 times the size of the palm of the hand)

TREATMENT

- In addition to normal food and fluid intake give: The **first 24 hours**: For every 10% of the body surface area with burns give three litres of salted water (1½ teaspoonfuls of table salt in 1 litre) intermittently to help replace fluid loss.

24-48 hours: For every 10% of the body surface area with burns give 1½ litres of fluids (preferably oral rehydration salt solution - ORS) intermittently.

- **RADIO FOR MEDICAL ADVICE**

After 48 hours the fluid intake should in principle be normal.

- Check for urine output that should be approximately 30-50 ml per hour (approximately 1 litre per 24 hours).

Further advice on fluid replacement: See Appendix 13

FOLLOW-UP

- A patient who has had significant exposure or any symptoms related to exposure should be kept warm in bed and closely observed for 48 hours and **RADIO MEDICAL ADVICE OBTAINED**.
- Emergency transport for on-shore hospital evaluation will usually be required.