
Information and recommendations for first responders

- Patients exposed only to acrylamide mist or vapor do not pose a significant risk of secondary contamination. Patients whose clothing or skin is contaminated with aqueous solutions of acrylamide (melting point 84.5°C, 184°F, respectively) can secondarily contaminate rescue and medical personnel by direct contact or evaporation of acrylamide.
 - Acrylamide is irritating when it comes in contact with the eyes, skin, nose and throat and causes hallucinations, hypotension, seizures, gastrointestinal and respiratory disorders. Encephalopathy, central nervous system changes and peripheral neuropathy may occur.
 - There is no antidote to be administered to counteract the effects of acrylamide. Treatment consists of supportive measures.
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1. Substance information

Acrylamide (CH₂=CHCONH₂), CAS 79-06-1

Synonyms: acrylic acid amide, ethylenecarboxamide, vinyl amide

Acrylamide is, at room temperature, a colorless and odorless crystal with a melting point of 84.5°C, 184°F, respectively. It is soluble in acetone and ether, and miscible with water and alcohol. Acrylamide is stable at room temperature, but it is quite reactive and known to polymerize violently when heated to the melting point or under ultraviolet light. Therefore, acrylamide is usually handled as inhibited aqueous solution. Carbon monoxide, carbon dioxide, ammonia, and NO_x may be released in an acrylamide fire.

Acrylamide is used as a reactive monomer and intermediate in the production of organic chemicals in the manufacture of acrylamide polymers and copolymers such as adhesives, fibers, paper sizing, molded parts, water coagulant aids, and textiles.

2. Routes of exposure

Inhalation

Exposure may occur by inhalation of acrylamide mist or vapor. Acrylamide is readily absorbed by the lungs.

Skin/eye contact

It is absorbed through the skin causing systemic effects.

Ingestion

Acrylamide is absorbed by the gut. Ingestion is uncommon in occupational settings.

3. Acute health effects

Systemic

Acrylamide causes hallucinations, hypotension, seizures, gastrointestinal and respiratory disorders. Encephalopathy, central nervous system changes and peripheral neuropathy may occur. Acrylamide poisoning may cause respiratory depression and cardiovascular collapse. Even after acute high dose exposure the appearance of these symptoms may be delayed for hours.

Respiratory

Acrylamide is irritating to the nose and throat.

Dermal

Irritation of the skin may be caused by direct contact to aqueous solutions of acrylamide.

Ocular

Eye contact to vapor or aqueous solutions causes irritation with burning discomfort, spasmodic blinking or involuntary closing of the eyelids, redness, and tearing.

4. Actions

Rescuer self-protection

If the zone that has to be entered by the rescuer is suspected of containing acrylamide, pressure-demand, self-contained breathing apparatus and chemical-protective clothing shall be worn; do not use equipment that is contaminated itself.

Patients whose clothing or skin is contaminated with aqueous solutions of acrylamide may secondarily contaminate rescue and medical personnel by direct contact.

Patient recovery

Patients should be removed from the contaminated zone immediately. Patients who are unable to walk may be removed on backboards or stretchers; if these are not available, carefully remove/transport patients with appropriate action to a safe zone, taking into account your self-protection.

Immediate priorities must follow the "**A, B, C's**" of resuscitation:

- A) Airway** (make sure the airway is not blocked by the tongue or by a foreign body)
- B) Breathing** (check to see if the patient is breathing, provide ventilation with use of appropriate barrier devices, e.g. with a pocket face mask, if breathing is absent)
- C) Circulation** (start CPR in any unresponsive person with absent or abnormal breathing)

Decontamination

Patients exposed to acrylamide require decontamination.

Patients who are able and cooperative may assist with their own decontamination. If the exposure involved acrylamide and if clothing is contaminated, remove and double-bag the clothing.

Irrigate exposed or irritated eyes with plain water or saline for at least 15 minutes. Remove contact lenses if present and easily removable without additional trauma to the eye. Continue other basic care during flushing.

Flush exposed skin and hair with plain water for at least 15 minutes. Protect eyes during flushing of skin and hair. Continue other basic care during flushing.

Following ingestion rinse mouth with plenty of water and afterwards administer charcoal as a slurry (240 ml water/30 g charcoal). Induced emesis is not recommended.

Further actions

Each potentially exposed person should seek medical advice and treatment. Even persons without symptoms should be observed for at least 6 hours.

In this document BASF has made a diligent effort to ensure the accuracy and currency of the information presented but makes no claim that the document comprehensively addresses all possible situations related to this topic. This document is intended as an additional resource for first responders in assessing the condition and managing the treatment of patients exposed to Acrylamide. It is not, however, a substitute for the judgement of a first responder and must be interpreted in the light of specific information regarding the patient available to such a first responder and in conjunction with other sources of authority.

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