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## Information and recommendations for patients

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- Aminonitrile contains free cyanide and can cause acute poisoning.
  - Patients exposed only to aminonitrile vapor do not pose a significant risk of secondary contamination. Patients whose clothing or skin is contaminated with aminonitrile-containing liquids may secondarily contaminate rescue and medical personnel by direct contact or through evaporation of aminonitrile or evolution of cyanide. Immediate skin and hair decontamination with water is crucial.
  - Aminonitrile poisoning may lead to death within minutes. Given reason to believe that aminonitrile-containing material is present, severe signs of lack of adequate tissue oxygenation in the absence of cyanosis (e.g., blue-tinged lips and nailbeds) suggest the diagnosis.
  - In case of suspected aminonitrile poisoning, immediate administration of 100% oxygen is crucial. If the patient is symptomatic/overexposed, the recommended cyanide antidotes should be used.
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### Substance information

2-amino-2,3-dimethylbutyronitrile

Synonym: aminonitrile

This product is composed of 2-amino-2,3-dimethylbutyronitrile (~ 80%) CAS 13893-53-3 and Toluene (~ 20%) CAS 108-88-3. It is colorless to amber oily liquid with a musty toluene odor. A small fraction dissociates to free cyanide (as HCN) under ambient conditions, whether as the neat (100%) liquid or in solution with non-reactive organic solvents such as toluene. HCN is in equilibrium with the aminonitrile and can be driven off simply by heating aminonitrile. Thermal decomposition of aminonitrile has been demonstrated, and it is known that the smoke from burning aminonitrile contains significant HCN. Within the body, metabolic processes can generate cyanide from the aminonitrile and cause cyanide toxicity. The odor of cyanide compounds does not provide adequate warning of hazardous concentrations. Since the compound is a solution in toluene, this product is flammable.

### What immediate health effects can result from exposure?

Small exposures to aminonitrile may cause headache, dizziness, weakness, nausea, and vomiting. Larger amounts can cause gasping, irregular heartbeats, seizures, fainting, and even death. Generally, the more serious the exposure, the more severe the symptoms. In case of suspected aminonitrile/cyanide poisoning breathing of pure oxygen is the first therapy. People with serious exposure and/or symptoms will need antidote therapy and subsequently will be hospitalized.

### Are any future health effects likely to occur?

A single small exposure from which a person recovers quickly is not likely to cause delayed or long-term effects. Some people who have had serious exposures have developed heart or brain damage.

## Follow-up instructions

Keep this page and take it with you to your next appointment. Follow only the instructions checked below.

- ( ) Call your doctor or the Emergency Department if you develop any unusual signs or symptoms within the next 24 hours, especially:
  - headache, dizziness, confusion, fainting
  - nausea, vomiting
  - chest pain, fast and/or irregular heartbeats, trouble with breathing
- ( ) No follow-up appointment is necessary unless you develop any of the symptoms listed above.
- ( ) Call for an appointment with Dr. \_\_\_\_\_ in the practice of \_\_\_\_\_  
When you call for your appointment, please say that you were treated in the Emergency Department at \_\_\_\_\_ Hospital by \_\_\_\_\_ and were advised to be seen again in \_\_\_ days.
- ( ) Return to the Emergency Department/ \_\_\_\_\_ Clinic on (date) \_\_\_\_\_ at \_\_\_\_\_ am/pm for a follow-up examination.
- ( ) Do not perform vigorous physical activities for 1 to 2 days.
- ( ) You may resume everyday activities including driving and operating machinery.
- ( ) Do not return to work for \_\_\_ days.
- ( ) You may return to work on a limited basis. See instructions below.
- ( ) Avoid exposure to cigarette smoke for 72 hours; smoke may worsen the condition of your lungs.
- ( ) Avoid drinking alcoholic beverages; alcohol may worsen your clinical conditions.
- ( ) Avoid taking the following medications: \_\_\_\_\_  
\_\_\_\_\_
- ( ) You may continue taking the following medication(s) that your doctor(s) prescribed for you: \_\_\_\_\_  
\_\_\_\_\_
- ( ) Other instructions: \_\_\_\_\_  
\_\_\_\_\_

Signature of patient \_\_\_\_\_ Date \_\_\_\_\_  
Signature of physician \_\_\_\_\_ Date \_\_\_\_\_

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