

Clearheart Construction Co., Inc.

Nitrogen Awareness

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Occupational Safety and Health Guideline for Nitrogen

As a point of interest, nitrogen; nitrogen makes up about 78% of the atmosphere by volume but the Earth's atmosphere.

Documented pre-job planning [hazard assessment] will be conducted for those operations involving potential nitrogen exposure. This would include anytime an active purge is being applied to a system in or around equipment associated with work.

All affected employees will be trained in nitrogen hazards. Nitrogen training will be provided at not cost by competent, qualified, persons.

Training:

Training will include a review of the Occupational Safety and Health Guideline for Nitrogen.

Health Hazard Information:

Routes of Exposure Exposure to nitrogen can occur through inhalation of the gas.

Summary of toxicology: Nitrogen is a simple asphyxiant that is without other significant physiologic effects. Inhalation of nitrogen is dangerous only when it lowers the available oxygen in air to below life-sustaining levels.

Acute exposure: The signs and symptoms of overexposure to nitrogen may include nausea, drowsiness, blue coloration of the skin and lips, unconsciousness, and death.

Chronic exposure: No signs or symptoms of chronic exposure to nitrogen have been reported in humans

First Aid Treatment: Prompt medical attention is mandatory in all cases of overexposure to nitrogen. Rescue personnel should be equipped with self-contained breathing apparatus.

Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most

important. Unconscious persons should be moved to an uncontaminated area, given assisted respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.

Signage:

Appropriate signage will be utilized and adhered to. Red signage (to indicate danger) will state:

DANGER
Inert Gas Present
Possible Oxygen Deficient Environment

Barricades:

As determined by the pre-job planning [hazard assessment], appropriate nitrogen vent / purge points will be identified, labeled, and barricaded with a safe zone three (3) foot in diameter, or greater if determined by oxygen monitoring. Outside the barrier, the breathing atmosphere **must be greater than 19.5% oxygen.**

Storage and Handling of Nitrogen Cylinders:

Nitrogen cylinders should be stored upright, properly supported, and stored outdoors in a well-ventilated area. Containers of nitrogen should be protected from physical damage and heat and should be stored separately from ozone. All nitrogen cylinders should contain an identifying label_

UN1066.

When the nitrogen cylinder is not in use, the protective cap must be in place.

With the exception of used in an inert atmosphere, nitrogen must not be used to power pneumatic tools or blowers.