

# NITROGEN GAS (1/2)

## IMPORTANT INFORMATION

**Stop work in cases of uncertainty, danger or deviations from the work permit; never improvise!**

**Report any unforeseen event or situation that deviates from the work permit to the HSE Manager immediately.**

- 1. Work with the wind behind you and ensure that the workplace is properly ventilated.**
- 2. Cordon off the workplace and respect barriers and cordons during maintenance work (nitrogen gas tanks).**
- 3. Have oxygen levels measured by an authorised gas tester.**
- 4. Take measurements regularly.**
- 5. Use the required additional PPE in workplaces with a risk of exposure to nitrogen.**

### QUESTIONS? MORE INFORMATION? UNSAFE WORKING CONDITIONS?

Your HSE Manager is there to help answer any questions and ensure a safe working environment for all.

## WHAT IS IT?

Nitrogen gas is naturally present in the air, of which it comprises approximately 78%. Highly compressed nitrogen gas is used for maintenance and inspection purposes. When it is released, it displaces the oxygen in the atmosphere. In concentrations higher than natural levels, nitrogen gas poses a major health risk. It can even lead to death. This means that extreme caution is necessary when nitrogen gas is being used.

### PROPERTIES OF NITROGEN GAS

- odorless
- tasteless
- invisible
- non-combustible
- oxygen displacing
- heavier than air

## HAZARDS

**In general:** Nitrogen gas displaces oxygen.

**Inhalation:** difficulty breathing, headache, dizziness, nausea, unconsciousness, death through asphyxiation.

**Skin contact:** risk of freezing: redness, pain, blisters, wounds.

**Eye contact:** risk of freezing: redness, pain, vision impairment.

## PREVENTION

### PREPARING FOR WORK

- read the work permit carefully
- ensure you are familiar with the risks of the job
- thoroughly discuss the risks (toolbox meeting)
- inspect your workplace
- familiarize yourself with safety routes and assembly point(s); ask your company for more information about this
- take the necessary precautionary measures
- use the correct (extra) Personal Protection Equipment (PPE)

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## NITROGEN GAS (2/2)

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- respect the areas marked as potentially containing high concentrations of nitrogen gas

### PREVENTING EXPOSURE – BEFORE STARTING WORK

- ensure monitoring of oxygen levels by an authorized gas tester
- ensure registration of these measurements in the work permit

### PREVENTING EXPOSURE – DURING WORK

- work and operate according to procedures and instructions; ask your company about their specific requirements
  - use the correct (extra) PPE
  - ensure measurements are carried out regularly
  - work with wind at your back
  - ensure good ventilation or deploy extra air extraction
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## PROTECTION

Always use the correct extra PPE in workplaces where nitrogen gas is suspected. Ask your company for further information in relation to this.

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## IN CASE OF...

Always use the correct extra PPE in workplaces where nitrogen gas is suspected. Ask your company for further information in relation to this.

### CALAMITIES

Ensure your personal safety first:

- leave the workplace diagonally to the wind
- go to an assembly point located in a windward location; ask your company about this

**Please note: never re-enter the workplace without independent respiratory protection equipment!**

### EXPOSURE

**In general:** when rescuing any affected person use independent respiratory protection equipment only (pressurized air)

**Inhalation:** request medical assistance immediately - commence artificial resuscitation until professional help arrives

**Skin contact:** rinse with plenty of lukewarm and clean water - if clothing is stuck to the skin, never peel it off

**Eye contact:** rinse with plenty of lukewarm and clean water - remove any contact lenses (if possible)

**Severe exposure:** alert a doctor immediately; contact the health and safety service (ask your company about this)

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