

# Contractor work at Borealis in Stenungsund





## Table of Contents

<b>Welcome to Borealis in Stenungsund</b> .....	3
<b>Contractor's responsibility</b> .....	5
<b>Subcontractor</b> .....	5
<b>Contractor's personnel</b> .....	6
<b>HSE responsible person</b> .....	6
<b>Borealis contact person</b> .....	6
<b>Access to Borealis site</b> .....	7
<b>Checklist for contractors</b> .....	7
<b>On-boarding of new personnel</b> .....	8
<b>Life-Saving Rules</b> .....	9
<b>Personal protective equipment</b> .....	10
<b>Risk assessment</b> .....	11
<b>Work permit</b> .....	11
<b>Work permit receiver</b> .....	11
<b>Coordination officer at the workplace</b> .....	12
<b>Safety guard</b> .....	12
<b>HSE tours and HSE meetings</b> .....	12
<b>Use of work equipment</b> .....	13
<b>Emergency alarm</b> .....	14
<b>Accidents, near misses and hazardous conditions</b> .....	15
<b>General safety regulations</b> .....	16
<b>Alcohol and drugs</b> .....	16
<b>Asbestos</b> .....	16
<b>Barriers</b> .....	16
<b>Bicycles</b> .....	17
<b>Car pass</b> .....	17
<b>Chemicals</b> .....	17
<b>Compressor, respiratory mask</b> .....	18
<b>Contact lenses</b> .....	18
<b>Electrical equipment</b> .....	18
<b>Excavation</b> .....	18
<b>Fire protection</b> .....	19
<b>Food and drink</b> .....	19
<b>Gas tubes</b> .....	19
<b>Housekeeping</b> .....	19
<b>Knives</b> .....	19

Mobile elevating work platforms .....	20
Nitrogen .....	20
Noise .....	21
Offensive behavior .....	21
Pets .....	21
Photo permit .....	21
Radioactive radiation .....	21
Scaffolding .....	22
Service outlets and hoses for air, water and steam .....	22
Smoking, matches and lighters .....	22
Synthetic inorganic fibers .....	22
Take 2 .....	23
Traffic .....	23
Transport of goods to a contractor .....	23
Visitors .....	23
Waste .....	24
Welding, grinding and cutting .....	24
Working alone .....	25
Working at height .....	25

## Welcome to Borealis in Stenungsund

At Borealis we work with innovative plastic and basic chemical solutions. We have 950 employees and are the only manufacturer of polyethylene (PE) plastic in Sweden. The products are mainly used in the pipe and cable industries. In Stenungsund, we are a world leader in plastic materials needed for insulation in power cables that carry energy over long distances, for example from offshore wind farms or between countries and even between continents.

Borealis in Stenungsund consists of three parts; the **Cracker plant**, which supplies all the chemical industries in Stenungsund with raw materials, the **Polyethylene plant**, which consists of separate units that manufacture different types of polyethylene plastic, and our **Innovation Center** where we develop new and innovative materials and solutions.



Borealis aims to be a workplace without serious accidents for its own staff and contractors, the environment or the facility. We do this through good management of the work environment, process safety, environment and energy. Borealis places the same requirements on contractors as on its own employees and therefore engages companies that have certified or equivalent management systems for quality, environment and occupational health and safety.

*Contractor refers to all external personnel performing work for Borealis, such as contractors, consultants, suppliers, etc.*

**If we can't do it safely, we don't do it at all!**

## **Contractor's responsibility**

Contractors working for Borealis shall conduct their work in accordance with Swedish legislation and Borealis HSE (Health, Safety and Environment) regulations as described in this document.

Borealis operations involve handling large quantities of flammable goods and various chemicals are involved in the production chain. There is a risk of fire and explosion from hydrocarbon releases. Some chemicals are dangerous by exposure, such as inhalation and skin contact. These conditions must always be considered even when the whole plant or parts of the plant are taken out of operation for maintenance or project work.

The contractor is responsible for conducting risk assessments for their own work carried out at Borealis and implementing risk mitigation measures. In some cases, the contractor is required to participate in risk assessments together with Borealis, for example where process equipment is affected or for extra critical work such as access to confined spaces, opening of process equipment, critical lifting etc.

The contractor is responsible for ensuring that relevant safety rules and risk mitigation measures from risk assessments are communicated to its own staff. The contractor must also check that the rules and measures are followed.

Anyone who does not follow Borealis rules or otherwise behaves in a way that jeopardizes safety may be immediately dismissed. This may apply to an individual or a group of employees. In case of serious or repeated misbehavior, the contractor's access card may be blocked, temporarily or permanently. Compensation for any related costs will not be paid by Borealis.

The contractor shall ensure that good order prevails at the work site. If this is not done, Borealis is entitled to clean up at the contractor's expense.

### **Subcontractor**

A contractor who engages a subcontractor is responsible for ensuring that the subcontractor conducts its activities in accordance with Swedish legislation and Borealis rules. The contractor is responsible for informing the subcontractor of Borealis requirements for contractor work as described in this document. The contractor must also continuously ensure that this is followed by the subcontractor. If a subcontractor fails to comply with Borealis rules, this may also have consequences for the main contractor.

## **Contractor's personnel**

The contractor's supervisors must be able to make themselves understood and understand Swedish or English and be able to communicate with the personnel being supervised. At each work site, i.e. in each work team, there must always be someone who understands Swedish or English in speech and writing.

Minors are not allowed to work at Borealis. The contractor is responsible for ensuring that the contractor's personnel have reached the age of 18.

The contractor is responsible for ensuring that its own personnel's professional competence and state of health are compatible with the nature of the work and that any necessary medical checks have been carried out in accordance with official requirements. Upon request, the contractor must be able to present a curriculum vitae for staff and valid certificates for professions where this is required.

- Scaffolding personnel responsible for construction must have undergone certified scaffolder training. Scaffolding may only be changed or adjusted by designated trained personnel. The scaffolder's supervisor or designated construction manager is responsible for approving the scaffolding.
- Contractors who perform "Electrical work" according to, ELSÄK-FS 1999:5 section C, must have completed the training. "Certified electrical work manager".
- Welders and contractors who perform work that involves open flames, sparking or the risk of this must have completed training according to the Swedish Fire Defense Association's course "Hot work" or similar training.
- Personnel involved in the handling, loading/unloading or transport of dangerous goods must have completed relevant ADR training.

Competent and experienced personnel shall be used for the work. If the client/contact person assesses that the contractor is using non-competent personnel, this may result in the contractor's work permit being withdrawn. Any extra costs caused by this will be paid for by the contractor concerned.

## **HSE responsible person**

Each contractor company working on Borealis sites shall have a named person responsible for HSE issues who can be contacted if necessary.

## **Borealis contact person**

The Borealis contact person is the representative of Borealis requesting the service, can be a Borealis employee but also a contractor.

## Access to Borealis site

The Borealis access card provides access to the Borealis site via a card reader. Contractors must also be able to prove their identity with an ID card or passport.

Access cards are only issued to people who have fulfilled the requirements of the checklist below.

The access card is valid for a maximum of one year for contractors. The access card is personal and may never under any circumstances be lent to anyone else. If you have forgotten or lost your card, the gatekeeper should be contacted.

If necessary, an access card can be blocked with immediate effect.

Access cards must be returned when the contract at Borealis has been completed. Unreturned access cards will be charged to the contractor.

## Checklist for contractors

Below is an overview of the steps to be followed to obtain an access card for work at Borealis:

### 1. Safety trainings for contractors

Before arriving at Borealis, contractors should have completed three training courses from the SSG course portal:

- SSG Entre Basic Course
- SSG Chemical Safety
- SSG Entre Borealis

The validity period for SSG Entre Borealis is 1 year. For other courses the validity period is 3 years.

### 2. Sedatus

Sedatus is a web-based system for managing contractors who are planning to work at Borealis AB. Sedatus is tasked with registering, evaluating and approving new contractor companies and individuals within the company to work at Borealis.

**Step 1:** Contractor requests a login to the Sedatus system, by submitting a special form to Borealis Purchasing.

**Step 2:** An email is sent to the contractor's contact person, with login details. The contact person enters the company details into the system.

**Step 3:** Borealis checks and approves the company.

**Step 4:** The contractor's contact person registers the details of all people who will work for the company with Borealis.

**Step 5:** Borealis checks and approves the persons.

The data of the persons is the basis for the access card system. The contractor is responsible for keeping the register accurate and up to date.

If the contractor intends to use subcontractors, this must be approved in advance by Borealis. The same process in Sedatus shall also be followed for subcontractors, steps 1-5. The subcontractor must be registered and authorised separately and linked to the main contractor in the Sedatus system. The same applies when using staffing agencies and for self-employed persons.

### **3. Posting**

In cases where posting is relevant, the company must register foreign labor with the Swedish Work Environment Authority (web address: [av.se](http://av.se)).

### **4. Motor vehicles - fixed car pass**

If the contractor's work requires motor vehicles, the contractor shall contact Borealis contact person who shall submit an application for a fixed car pass, see Car pass on page 16.

## **On-boarding of new personnel**

In connection with receiving the access card from the gatekeeper, the brochures "Safety at Borealis" and "Life-Saving Rules" are provided. The contents of the safety brochures are basic rules as well as important phone numbers and maps of Borealis facilities. The person must sign the safety booklet, and the supervisor/manager/host must also write his/her name and phone number.

The immediate supervisor or the contractor's host should personally meet the person in the Gatekeeper, and is expected to conduct a introductory briefing with new staff at the site. New staff should be accompanied until they find their way around the site and until they demonstrate that they understand basic HSE rules at Borealis, such as the Borealis Life-Saving Rules.



## Life-Saving Rules

The Borealis Life-Saving Rules are binding for everyone working for Borealis, both Borealis employees and contractors. The Life-Saving Rules apply at all times and in every workplace. The Life-Saving Rules must not cause other risks and rules to be ignored.

Violation of the Borealis Life-Saving Rules is considered serious misconduct and may result in the suspension of the contractor's access card, temporarily or permanently.



### Work Authorization

Work with a valid permit when required



### Energy Isolation

Verify isolation and zero energy before work begins



### Bypassing Safety Controls

Obtain authorization before overriding or disabling safety controls



### Hot Work

Control flammables and ignition sources



### Confined Space

Obtain authorization before entering a confined space



### Working at Height

Protect yourself against a fall when working at height (above 1.8m)



### Safe Mechanical Lifting

Plan lifting operations and control the area



### Line of Fire

Keep yourself and others out of the line of fire



### Driving

Follow safe driving and traffic rules

## Personal protective equipment

General requirements for personal protective equipment should be used where the nature and rules of the work require it. Work clothes are described below.

When visiting the plant area, the following requirements are set for personal protective equipment:



- Flame-retardant, fully covering, approved work clothes. Minimum class 1 High Visibility on either upper or lower part. In exceptional cases, warning vests can replace Hi Vis on work clothes.
- The class of flame protection on the clothes must be adapted to the work task.
- Helmet with chin strap.
- Safety glasses.
- Safety shoes class S3 but S2 can be accepted.
- Protective gloves should always be worn on site. Impact protection gloves must always be used for all mechanical work, unless a risk assessment of the work step shows that another type of glove should be used. Mechanical work includes all work steps with movements and forces that can pose a risk of crushing and impact injuries.
- Impact protection gloves must always be used when assembling and dismantling scaffolding.
- Cut-resistant gloves used on site must be at least class D according to ISO-13997.
- Hearing protection and full-coverage goggles must always be carried and used in marked areas or when necessary.

The clothes should be marked with the company name.

Ties or loose clothing must not be worn when working near machinery with moving parts, as well as rings, wristwatches and the like.

When working in [switchgear](#), all personal protective equipment must be classified with arc flash protection, minimum 8 cal/cm<sup>2</sup>. For electrical work, the electrical safety manager decides the need for electrical protective clothing with regard to specific electrical hazards in the work. Normally, however, a minimum of 8 cal/cm<sup>2</sup> and class 1 clothing in instrument rooms applies. There is no general requirement for helmets in switchgear and instrument rooms.

The general requirement when staying in the workshops is full-coverage clothing and safety glasses. However, when working in the workshop, requirements apply for flame-retardant, full-coverage, approved work clothing and other personal protective equipment adapted to the nature of the work.

In laboratories, local rules apply and are clearly posted.

Contractors are generally responsible for providing personal protective equipment for their staff. Where there are special requirements related to the process, Borealis provides protective equipment. These include chemical protection gloves, chemical protection overalls and breathing masks.

There are some exceptions to the general rules for personal protective equipment. The Borealis contact person is responsible for informing the contractor about relevant exceptions.

## **Risk assessment**

The contractor is responsible for conducting risk assessments for their work carried out at Borealis and implement risk mitigation measures. This requires knowledge of the task and working conditions.

In some cases, the contractor is required to participate in risk assessments together with Borealis (SJA), to identify risks for critical work or where the process contributes to risks.

## **Work permit**

Borealis uses an electronic work permit system, RAP. Work permits are required for all types of work within Borealis facilities and labs.

The work permit is a document that declares what is to be done and where method, tools, conditions and prerequisites apply to the specific work.

The work permit process ensures that risks have been identified and controlled by preventive and mitigative measures for the specific area and work.

Deviations from the work permit instructions can easily result in accidents.

The work permit must always be available at the workplace.

Working hours are normally 07:00 - 16:00, unless otherwise agreed.

In case of uncertainties/deviations? Stop work, report! Applies to everyone!



## **Work permit receiver**

Contractors authorized as permit recipients may sign and receive work permits. To become a permit recipient, special training with a knowledge test and good knowledge of the area are required. The authorized recipient is responsible for ensuring that the requirements of the work permit for safe work are communicated and complied with throughout the execution.

Contractors authorized as work permit recipients can sign and receive work permits. Becoming a permit to work recipient requires a good knowledge of the area and the HSE regulations. To obtain this authorization, you must undergo a training course with a knowledge check.

The work permit receiver's responsibilities:

- confirms by signature that one agrees with the requirements and instructions in the work permit
- register all workers on the permit
- request new instructions if actions or information are incomplete or incorrect
- have daily toolbox meetings with workers to share the content of the work permit prior start of work

The work permit receiver is also responsible for requesting an extension of the permit if needed as well as handing over the equipment to operation when the work is complete. The workplace must then be restored and cleaned.

### **Coordination officer at the workplace**

The production managers at Borealis site have the role of coordination responsibility for their specific plant. The coordination responsibility only applies to the coordination and is not a total responsibility for the work environment work of all the companies involved.

### **Safety guard**

A safety guard is a person who is assigned to monitor the area and workplace to alert workers in the event of a gas leak or fire and, if necessary, to help to rescue people and extinguish a fire. Upon entry into a confined space, safety is monitored by an entry guard, who is a safety guard with slightly increased competence.

## **HSE tours and HSE meetings**

**HSE tours** usually have a technical orientation with a focus on the physical work environment. Depending on the scope of the contractor's work and contractual requirements, HSE rounds must be carried out at the contractor's own workplaces. The rounds must be recorded with measures for deficiencies found, as well as the person responsible and the end date.

**Engagement walks** are tours focusing on influencing the safety culture through a good dialogue with open questions and serious interest and supporting people to reflect on their own safety behavior. Dialogue rounds can be conducted individually or by several people together, but a maximum of 3 people is recommended.

**HSE meetings** are to be held regularly by the contractor with its own staff for information on current safety issues, work permits, review of incidents or accidents, updates on Borealis rules, etc. The Borealis contact person is expected to be invited to attend the meetings.



**Toolbox meetings** are daily HSE meetings between the supervisor/permit receiver and workers. At the meeting, relevant information in the work permit and the work for the day shall be communicated such as:

- Job description
- Authorized activities and tools
- Risk mitigation measures
- Review of written Take 2

The toolbox meeting should be a two-way communication, the workers should be able to influence actions. However, the requirements in the work permit are a minimum requirement.



## Use of work equipment

The supervisor is responsible for ensuring that there is a risk assessment for the use of the work equipment to be used for the work. Work equipment refers to all types of equipment used in the work, such as forklifts, lifting equipment, machines, high-pressure units, installations, hand-held tools, etc.

Work equipment must be CE marked (or meet equivalent requirements) and may only be used for the purpose and under the conditions for which it is intended and suitable. Work equipment must be stored, installed, positioned and used so that adequate safety is achieved. Personnel must be trained and competent in the use of the relevant work equipment. The equipment must be continuously checked and maintained. Work equipment subject to inspection requirements

must be approved according to Swedish standards. If the equipment has a contact guard or other type of protective plate against personal injury, it must always be attached during use. Broken tools should be repaired or discarded. The correct type of personal protective equipment should be used, such as eye protection and protective gloves, and finger savers where relevant.

Work equipment should be used with appropriate working postures and movements and otherwise in an ergonomically appropriate way. The contractor is responsible for planning the work with vibrating equipment so that the limit value for daily vibration exposure is not exceeded.

To drive a forklift on Borealis site and use lifting equipment and lifting gear, documented training and a driving license are required. Contractors apply to the Plant Availability HMS coordinator for a permit to drive forklift at Borealis site. A permit is also needed to use Borealis lifting equipment. Training certificates must be attached to the application.



## Emergency alarm

An emergency alarm is triggered in case of danger in the plant. In the event of an emergency alarm, a signal is sounded and red signal lights in the risk area are switched on.

- Work must be stopped immediately. Work permits become invalid.
- Motor vehicles and machinery must be stopped and engines switched off. Keys should be left in the ignition.
- Staff should go to the nearest assembly point and swipe their access card in the card reader. At the assembly point, they should contact their supervisor.
- Staff who are in a reinforced building stay there and register the card in the buildings card reader.

The emergency alarm is valid until a "danger over" message or signal is received. Only then the persons may return to work. The work permit must be renewed before the work can resume.

The emergency telephone number at Borealis is:

**Cracker: 0303 87112**

**Polyethylene: 0303 86112**



## Accidents, near misses and hazardous conditions

In the event of an accident the priority, after raising the alarm, is to take care of the injured. Borealis has trained medical personnel who help with first aid. If necessary, an ambulance is called. There are defibrillators at several locations on the sites. In some cases, the accident site must be secured, e.g. with barrier tape, and documented with a camera. After a serious accident, the workplace should be shut down until the manager responsible has given permission to resume work.

HSE cases such as accidents, near misses and dangerous conditions must be registered in the Borealis Synergy system within 24Hrs. Contractors who are prevented or lack authorization in Synergy must contact the Borealis contact person to submit a notification to be registered in Synergy system.

The contractor is responsible for carrying out an investigation of events in their own teams, and contacting the authorities, when necessary, unless otherwise agreed. The contractor shall participate in investigations conducted by Borealis concerning their personnel or company.

## **General safety regulations**

The general safety regulations are presented in alphabetical order.

### **Alcohol and drugs**

Alcohol and drugs are prohibited at Borealis. It is forbidden to carry, use or be under the influence at Borealis. It is zero tolerance, which means 0.0 per mille of alcohol in a breath test and that there must be no traces of drugs in the body in a drug test in saliva or urine. Random alcohol and drug tests are conducted on Borealis premises. If a person refuses to participate, it is considered a positive test and the person is immediately removed and the manager is contacted. If there is a reasonable suspicion that a person is under the influence, Borealis has the right to conduct tests to confirm or deny the suspicion.

### **Asbestos**

All handling of asbestos or asbestos-containing materials must be carried out in accordance with the Swedish Work Environment Authority's regulations on asbestos. If it is suspected that asbestos has been discovered during work, the work must be stopped immediately and the area cordoned off. The suspicion must be reported to the nearest supervisor and to the project or plant manager. The project/plant manager decides on supplementary sampling and, if established, remediation with the help of a qualified asbestos remediation company.

### **Barriers**

In the case of work that may involve danger for people passing by or working in the immediate area, the risk area must be cordoned off. For example, there may be a risk of falls/falling objects, exposure to dangerous gases/substances/particles, high-pressure spraying or during ongoing lifting work. Barriers must be sign with symbol for "Access prohibited" and information on cause, person responsible (name, company and telephone number) and the expected time of the barrier. A restricted area may only be entered by persons authorized by the person responsible for the barrier.

The barrier should be designed to prevent unintended entry from any direction. The size of the barrier shall be justified by the risks. When conditions change, the restricted area shall be changed or the barrier removed. If the cordoned off affects traffic (pedestrian as well as vehicles) there must be traffic diversion signs. If the barrier is difficult to see in the dark, it should be equipped with warning lights/reflex.

Contractors are recommended to use their own barrier, as tape and/or hard barriers, with printed company name.



## **Bicycles**

Bicycles used at Borealis must be in good condition and marked with the name of the owner/company or the color of the bike pool and serial number. Bicycles with bicycle lights attached are not allowed into the facility, regardless of whether the lights are battery or generator powered. All bicycles used on the Borealis site in winter must be fitted with studded tires.

In case of unsuitable road conditions for cycling, cycling is prohibited on Borealis sites. Bicycle bans are displayed with a flashing light on a number of strategically placed signs, and via email to managers who are tasked with passing on the information.

## **Car pass**

Motor vehicles shall not normally be used at Borealis sites. Only working vehicles and necessary transport of tools and materials are authorized to be used. Transport of personnel is prohibited. Driving a vehicle in a flammable area must be escorted by a specially appointed person with a gas detector. An escort is also required outside a flammable area if the driver is not familiar with the area.

A permanent car pass must be applied for via the Borealis contact person. The authorization is valid for one year with the possibility of extension. Vehicles with a permanent car pass may only pass through the gates that are authorized on the specific car pass.

Temporary vehicle passes must be applied for by the Borealis contact person and apply to material transport that cannot be transported in any other way. Normally valid for one day. The permit must be obtained from the gatekeeper before motor vehicles are planned to enter the facility. Without an approved permit, the vehicle will not enter.

The people in the car passing the gate must always register themselves in the card reader.

## **Chemicals**

Borealis chemicals are registered in iChemistry which is a chemical management system where Safety Data Sheets (SDS) and Material Safety Data Sheets of raw materials, process chemicals, maintenance chemicals and QC laboratory chemicals are stored. iChemistry can be found on Borena under Local Practicalities or on the HMS Stenungsund SharePoint page.

If there is a risk of exposure to Borealis chemicals, requirements for personal protective equipment must be stated on the work permit and a safety sheet must be attached.

All chemical products brought into the Borealis area by a contractors must have a Swedish safety data sheet or an equivalent information document. Only chemicals approved by Borealis may be brought into Borealis site.

The contractor is obliged to ensure that there is a risk assessment for the use of their own chemicals and that its personnel are informed about the risks that may occur and handling regulations including requirements for personal protective equipment and first aid. Chemicals may only be used for their intended purpose and in areas where they are authorized.

When storing chemical substances and products, it is important to ensure that any spillage cannot harm people or leak into the ground, water and sewage wells. It is also important to

ensure that chemicals cannot react with other substances or materials to form hazardous substances. Some basic rules for storing chemicals are:

- Fan-controlled ventilation if there is a risk of harmful gases and vapors.
- Separate storage if there is a risk of dangerous chemical reactions.
- Containment to catch any leaks.
- Locked storage of toxic chemicals.

### **Compressor, respiratory mask**

Air to respiratory masks taken via a compressor must have an air purification system certified for breathing air. Compressors for producing breathing air are not permitted to be placed where there is an estimated risk of gas emissions. Decisions on placement and assessment of the risk of gas emissions should always be made in consultation with the operating organization.

### **Contact lenses**

It is important to remove contact lenses when rinsing the eyes because it counteracts eye flushing and can therefore worsen any eye injury. It is recommended not to wear contact lenses when handling chemicals or when performing work where there is a risk of chemical splashes in the eyes.

### **Electrical equipment**

**Portable electrical equipment** that is not ATEX classified is not allowed to be brought into flammable areas without a valid work permit. Exceptions are simpler watches and hearing aids with a permanently mounted battery, such as a button cell battery, AAA LR03 or AA LR6 with a maximum of 1.5 V. More detailed rules can be found in the HSE handbook.

When a workplace is left for any reason, as a break, work task in the workshop, end of workday, etc., non-ATEX classified electrical equipment must always be disconnected or removed. The same applies if the work permit expires, for example in the event of an emergency alarm.

**Ordinary mobile phones and laptops** may not be taken into an ATEX area. **ATEX-certified mobile phones** require authorization on both the phone and the user to be brought in and used. The contractor should contact the Borealis contact person for assistance in applying for an ATEX mobile phone permit. With an approved permit, the ATEX-phone may be used without a work permit even in an ATEX area.

### **Excavation**

Before excavation, there is a special digging checklist that must always be filled in and followed. A serial number per job is required and the responsibility for requesting a serial number and following the excavation checklist rests with the land purchaser. Good foresight and planning are required before permission for excavation can be given and digging can begin.

## **Fire protection**

Fire-fighting equipment and emergency routes must never be blocked. Fire-fighting materials may only be removed from a fire hydrant station for an extinguishing operation.

Some buildings are equipped with automatic fire alarms and fire alarm buttons. If local fire alarm bells sound, the building in question must be evacuated. The assembly point for fire alarms is indicated in the building's evacuation plan.

## **Food and drink**

Food or drink may not be stored or consumed in plant areas or in laboratories. Food and drink may only be stored, prepared or consumed at designated places.

Exposure to chemicals occurs mainly through the respiratory tract and skin. Exposure through the mouth is possible via the hands, for example when smoking or eating. The effects can be acute or appear after several years.

## **Gas tubes**

Gas tubes should be stored in a designated place. Tubes for compressed gases should always be securely anchored. If the tube is not connected, the protective cap should be fitted.

## **Housekeeping**

Good housekeeping means the following:

- Good order is maintained in the work area - the right thing in the right place.
- Machinery, tools and equipment are fit for purpose and kept in good condition.
- Tools, repair equipment, ladders, etc. are stored in designated areas.
- Hoses and cords are suspended in hose/cord holders, reels or s-hooks.
- Protruding nails or sharp objects are removed, covered or bent in.
- Oil and pellet spills are picked up immediately.
- Walkways, stairs, transport routes and escape routes are kept clear of materials and suchlike.
- Pits, manholes, openings in railings, removed gratings and the like are fenced or firmly covered with load-bearing material.
- The work area is cleaned and restored to its original condition when the work is completed.

## **Knives**

Safety knives, such as pelican knives, are approved for use in the Borealis area.

Utility knives such as folding blade knives and carpet knives are approved if they are knives with ceramic safety blades (e.g. from the Slice brand).

Knives with fixed blades, such as mora knife/forged iron knife, are not permitted.

For work steps where a knife with a fixed blade is required (e.g. scalpel or knife for stripping electrical cables), exceptions must be approved by the Location Leader. For approval, a risk analysis (SJA) is required, e.g. includes that the knife must be used together with cut protection gloves.



## **Ladders and trestles**

Ladders and trestles may only be used if they have been type-checked by an approved certification body. Ladders and trestles must be made of steel or aluminum (except in switchgear where they must be made of non-conductive material) and must be fitted with anti-slip protection and have the correct length/height for the purpose. Ladders that are 3 m or higher must have back protection, which must start at about 2.3 meters.

Ladders may only be used as an access point and for easier short-term work from the ladder. It can be inspection or control of equipment, replacement of a broken lamp, easier lubrication as well as replacement and adjustments. Work from a ladder may only take place if the risks of using a ladder are so small that other safer equipment is not justified. The contractor must carry out a risk assessment using Take 2 before starting the work to assess risks and assess whether ladders are authorized to be used.

Ladders and work stands must never be placed near doors, gates and corners without supervision. They must be kept free of grease and oil and if damaged they must be repaired or discarded. The user must always check the ladder or work trestle before use.

Ladders leading up to a platform/roof or similar should reach about 1 meter above the platform or roof. The protruding step part at the top of a leaning ladder shall not be entered. Access to a ladder from a platform, roof or similar must be possible in a safe manner. When working from a ladder, personal fall protection must be used where the fall height is 1.8 meters or more.

## **Mobile elevating work platforms**

A mobile elevating work platform (MEWP) must have a user manual attached to the platform and personnel using a MEWP must have documented training. When working on a MEWP, personal fall protection equipment shall be used. The operator may not leave the operating position as long as someone is still in the basket. It is not allowed to use a MEWP to transfer people from one level to another, or for people to exit the platform at height.

## **Nitrogen**

Nitrogen gas is mainly used as a protective gas for processing equipment and in analysis equipment. Nitrogen gas is odorless and invisible and is not inherently toxic. The danger of nitrogen is that it displaces oxygen in the air and high levels can cause suffocation. The symptoms are insidious and difficult to recognize. The person does not notice anything until the oxygen level is so low that they are unable to get out into the fresh air. Without testing with a measuring instrument, it is not possible to determine whether the oxygen level in a closed space is correct, i.e. normally 20.9 %. Liquid nitrogen is extremely cold (-196°C). It can cause severe frostbite on skin contact and also on contact with refrigerated equipment. The eyes are particularly sensitive and must be protected from splashes.

When working on equipment containing nitrogen gas (e.g. blind flange tightening, opening manhole covers), the pressure in the equipment must be equalized and air circulation around



the workplace must be good. Work involving the escape of nitrogen gas must not be carried out as a lone worker and those involved must wear oxygen meters with alarms. An escape route must be available. This must be taken into account when preparing the work and issuing a work permit. In the event of a low oxygen alarm, work must be stopped immediately.

## **Noise**

Hearing protection must be carried out and always used in marked areas or when necessary.

Reinforced hearing protection is required in certain areas of Polyethylene plant and Kracker plant. These areas are marked with a red dot on the sign for hearing protection. Enhanced hearing protection means that the hearing protection must have an attenuation (SNR value) of at least 33dB(A). The Peltor Optime III earmuffs and some earplugs, for example, have this attenuation.

For noisy activities that can be disturbing to the environment, special measures may need to be taken, such as avoiding noisy work in the evening and at night or at least minimizing it.

## **Offensive behavior**

Bullying, discrimination and other offensive behavior is forbidden at the worksite. We care about each other. Our work environment should be characterized by an open dialogue and all individuals should be treated equally and with respect.

## **Pets**

Pets are not allowed in Borealis areas where access cards are required.

## **Photo permit**

A photo permit is required to take photographs within Borealis facilities. Photo permits are required for both photography and use of images/files, internal as well as external use. The contractor should contact the Borealis contact person for assistance in applying for a photo permit.

## **Radioactive radiation**

When radioactive isotopes are brought into Borealis area for e.g. material inspection or measurement, Borealis Radiation Protection Officer shall be notified regarding storage and handling. Areas that have been fenced and labelled with warning signs about radioactive radiation must not be entered. Special requirements and rules from authorities apply. If in doubt, consult the Borealis Radiation Protection Officer.

## **Scaffolding**

Scaffolding may only be changed or adjusted by designated trained personnel.

Scaffolding personnel responsible for construction must have undergone certified scaffolding builder training and must have good knowledge of the requirements of the Swedish Work Environment Authority's regulations and Borealis' internal requirements for scaffolding. The scaffolding supervisor or designated construction manager is responsible for approving the scaffolding. This person must have at least the equivalent of 80 hours of training in accordance with Appendix 3 of AFS 2013:4.

Scaffolders shall provide Borealis with copies of the valid training certificates of all scaffolders who are to work for Borealis. Furthermore, the scaffolding company shall provide Borealis with a plan for the safe erection, use and dismantling of the scaffolding before work begins. If weather protection is included in the construction, this shall also be included. Dimensioning documents shall be included.

## **Service outlets and hoses for air, water and steam**

Air, water and steam hose connections to process equipment may only be made by operating personnel. The owner of the hoses is responsible for carrying out continuous monitoring of these. The continuous inspection must be recorded, and the hoses must be labelled annually with an inspection label or marked with the color of the year.

## **Slippery winter Conditions**

Stepping into areas that are slippery due to snow and ice can lead to an increased risk of falling accidents. If you see a surface where there is a risk of slipping accidents, you should act as follows:

- Avoid walking on the surface.
- Treat the surface with, for example, a snow shovel and/or sanding.
- Block off the area if it is not possible to treat the surface yourself and contact your supervisor/contact person for further communication to Borealis.

## **Smoking, matches and lighters**

Smoking is permitted only in specially designated smoking areas. Matches and lighters may not be brought into the facility. Matches must be provided in the designated smoking areas.

## **Synthetic inorganic fibers**

For certain synthetic inorganic fibers, such as refractory ceramic fibers, it is required that personnel have undergone a medical examination before starting work. The medical examination is designed to detect particularly sensitive people who should not be exposed to these types of fibers. There are also requirements for periodic checks to detect as early as possible if someone starts to suffer from the work.

When working with materials containing synthetic inorganic fibers, care must be taken to ensure that the work is carried out in such a way and with such equipment as to prevent the spread of dust. Personal protective equipment appropriate to the work should be used. There may also be a need to carry out exposure measurements in some cases.

## **Take 2**

Take 2 translates as "Take 2 minutes" and is a way of activating the brain before the hands. Stop long enough before starting work to think about WHAT you are going to do. Think about HOW you are going to do it. What tools do you plan to use? Think about the RISKS involved in the work. Evaluate and eliminate the risks identified. Reflect on the safety measures. Are the measures right and sufficient to control and minimize the risk of injury or accident? This is an approach that should be used in all situations. Some work requires documentation in a pre-printed Take 2 block. For electrical work, there is a special Take 2 block to be used.

## **Traffic**

Vehicular traffic within the plant is only permitted in connection with the transport of goods or with special authorization. Lighter packages and tools must be carried or transported on a flatbed bike or in a bicycle basket.

Special rules for motor vehicles apply in the area. Only certain roads may be used without a work permit. The speed limit is normally 30 km/h, but 20 km/h is also possible. Maneuvering space must always be left for Borealis internal work vehicles. Pedestrians and cyclists are directed to marked roads. Where footpaths and cycle paths cross the carriageway, cyclists and pedestrians must give way to other vehicles.

Safety vests or clothing with a warning effect must always be worn in the MH area and other loading and unloading points in the facility.

For personal mobility, no form of roller skates, skateboards, unicycles or other play/sports equipment is allowed.

## **Transport of goods to a contractor**

In case of deliveries of goods ordered by the contractor, the contractor shall inform the purchasing/storage function and the gatekeeper well in advance of the arrival of the goods at Borealis that the transport of goods is expected. Upon arrival of the goods, the driver notifies the gatekeeper who contacts the recipient of the goods. If there is uncertainty about the unloading point, or the route to it, the contact person for the contractor must guide the goods transport from the gate to the unloading point. High visibility clothing or vests should be worn in loading and unloading areas.

Before unloading dangerous goods, the contractor must check that the packaging is tight and undamaged and take note of the transport documents describing the risks and protective measures. When transporting dangerous goods on the site, the goods must be load secured.

When exporting goods from Borealis facilities, the contractor must obtain a certificate of authorization for export from the client/contact person.

## **Visitors**

A contractor who wants to bring visitors into the facility must have completed a test and been approved by the HSE manager. Visitors must be followed by the host, who also picks up and leaves visitors at the guard. The host of the visit is responsible for the visitors' safety during the visit and must ensure that Borealis interests are not jeopardized by the visit.

Personal protective equipment for visitors can be borrowed from Borealis. PPE for larger visitor groups must be planned well in advance. Visitors who wish to visit the facility outside the

pedestrian and cycle paths must always apply for a permit for this from the relevant control room.

### **Walking and cycling paths**

Pedestrians and cyclists should always, where possible, use marked walking and cycling paths on the site. Pedestrian and cycle paths are marked with yellow solid or dashed (when crossing a road) lines. Motor vehicles must be given priority on Borealis, even if the pedestrian and cycle paths are crossed. Extra care should be taken at junctions and in dark places and eye contact should always be made. This applies to drivers of motor vehicles, as well as cyclists and pedestrians.

### **Waste**

Employees and contractors must follow the procedures for sorting waste at source. Recycling stations with bins and containers are located inside offices as well as around the sites. For contracts where waste is expected to arise to a greater extent, the contractor must plan for this and ensure that extra containers are procured for the fractions in question.

No oils, chemicals or other substances may be flushed into drains at the facility. It must be collected in marked barrels or handled by a vacuum truck. There are special storing areas for hazardous waste. Before waste may be placed there, it must be approved by the person responsible for the relevant area.

In the case of contracts where waste is expected to occur on a larger scale, the contractor must plan for this and ensure that extra containers are procured for the fractions in question. Contractors who handle hazardous waste must, before work begins, plan how the hazardous waste will be disposed of. The contractor must follow authority regulations and the special instructions given by Borealis. During the time that the hazardous waste is stored within the work area, it must be stored in prescribed packaging and, if necessary, have a secondary containment system.

### **Welding, grinding and cutting**

Welding, grinding and cutting must be avoided as far as possible in flammable areas and may only be used when other methods are not suitable. Workplaces shall be shielded to protect surrounding personnel from welding flash and spatter and to prevent sparks from igniting combustible materials. Persons carrying out the work must wear the necessary personal protective equipment. Eyes must be protected with fully protective goggles.

Welders must have a valid certificate of competence. Personnel who carry out welding, grinding, cutting or the like must have undergone "Hot Work" training or the equivalent. The same applies to safety guards during hot work.



### **Working alone**

A person is "alone" at work when the person performs work on their own, where no person is close enough to recognize danger or to rescue a person in an emergency. When planning and organizing lone work, it is important to consider whether it involves risks or stresses. The worker's ability to interact with other people should be considered, especially in an emergency situation. Particular attention should be paid to whether the worker has sufficient training, information and instruction to carry out the work alone. Consideration shall also be given to the worker's physical and mental capabilities for the work. If acceptable safety cannot be achieved, the work must not be carried out as lone work.

### **Working at height**

All work at height shall be planned and carried out in such a way as to prevent accidents due to falls or falling objects. When working at heights higher than 1.8 meters, fall protection must always be provided. If there is no railing or other fixed device, personal fall protection equipment must be used. The use of personal fall protection equipment requires documented training.

Surfaces that can be walked on must have sufficient bearing capacity and surface roughness to prevent trampling and falls. There must be no dangerous elevations, holes or slopes. Openings and holes in gratings, roofs, floors or the like, where there is a risk of collapse or step through, shall immediately be provided with a guardrail or protective covering which has adequate bearing capacity and cannot be accidentally disturbed.

Work platforms and access routes shall be secured from the risk of falling objects by using buckets or similar for bolts and other small items and securing tools with tool lanyards. In addition, the platform or scaffolding may need to be secured with safety nets. In some cases, it may also be necessary to cordon off the workplace.



If we can't do it safely, we don't do it at all!



Mars 2025



**Borealis AB**

444 86 Stenungsund

Tel: +46 (0)303 86 000

[Borealisgroup.com/Stenungsund](https://Borealisgroup.com/Stenungsund)