



SAFETY AND ENVIRONMENTAL INSTRUCTION FOR EXTERNAL COMPANIES

ALUNORF

SAFETY AND ENVIRONMENTAL INSTRUCTION FOR THE WORK OF EXTERNAL
COMPANIES AT ALUMINIUM NORF GMBH

Welcome to ALUNORF

You are operating on our plant premises as a contractor or subcontractor. This Safety and Environmental Instruction is intended to help you, as an external company, become familiarised with important rules of conduct and safety regulations at our premises.

You can also obtain information from your ALUNORF contact (e.g. contractor coordinator) and our specialist departments.

**Occupational safety, environmental protection and quality are
the top priority at our plant!**

With the aim of mutually satisfactory cooperation and the conviction that all work can be conducted without putting the health and safety of personnel in danger, we expect strict compliance with the following instructions.

Table of contents:

| | |
|---|----|
| 1. Scope | 3 |
| 2. General provisions | 3 |
| 3. Start of work | 3 |
| 4. Site facilities | 4 |
| 5. Fire and explosion protection | 4 |
| 6. Traffic safety..... | 6 |
| 7. Use of lifting equipment | 7 |
| 8. Securing of machine equipment and switching operations | 7 |
| 9. Alcohol, smoking and intoxicants | 8 |
| 10. Excavation work | 8 |
| 11. Personal protective equipment | 8 |
| 12. Emergencies and reporting of occupational accidents..... | 9 |
| 13. Use of working materials and hazardous substances..... | 10 |
| 14. Handling of waste | 10 |
| 15. Protection of ground water and soil | 11 |
| 16. Plant safety..... | 12 |
| 17. Safety absolutes – rules without exceptions | 12 |
| 18. Liability | 14 |

1. Scope

This instruction apply to all contractors and their subcontractors working at the ALUNORF premises. It is a binding component of contracts.

2. General provisions

All personnel must be instructed on the specific details of the place of work before beginning work!

- The contractor undertakes to observe the applicable legal regulations.
- If the contractor assumes activities whose performance occurs at the same time and place as activities performed by other contractors or ALUNORF, the contractor undertakes to coordinate the necessary safety measures with them.
- The contractor bears full responsibility for occupational safety and environmentally compatible conduct at the place of work. The contractor must inform the ALUNORF contact (e.g. contractor coordinator) of the responsible contact (e.g. construction manager of the external company). Supervisory responsibility for the execution of transport and assembly work lies exclusively with the contractor.
- The contractor must ensure that at least one German-speaking employee is available in its working group, who is able to comprehend corresponding instructions and provide information on an emergency call in the event of an emergency.

3. Start of work

- Before beginning work, the contractor must report to the ALUNORF contact (e.g. contractor coordinator) and obtain relevant instructions.
- It is only permissible to begin work with a completed “permit for work by external companies” (FB-AS 00503). Where no permit can be presented, work must be suspended.
- Only the designated work areas may be accessed. ALUNORF facilities and equipment may only be used with the express consent of the contractor coordinator.
- In order to ensure that work can be carried out smoothly and safely, all work must be coordinated with production or other trades in advance.

4. Site facilities

**Cleanliness, orderliness and safety
are very important to us!**

- Site facilities (trailers, containers, etc.) may only be set up at the places allocated by the contractor coordinator with the approval of the plant fire brigade.
- No pressurised gas bottles may be stored in site facilities. Combustible liquids may only be stored in the minimum quantities permitted according to regulations. The necessary fire extinguishing equipment must be installed and maintained in accordance with legal regulations.
- Construction sites and certain outdoor tasks may not produce any significant noise at night (10pm – 6am). Low-noise equipment must always be used.
- Traffic and emergency escape routes must always be kept clear.
- The contractor undertakes to seal off and secure its construction areas, places of work and storage sites with its own barrier materials, if necessary.

5. Fire and explosion protection

- The instructions of the plant fire brigade on the prevention of fire and explosion hazards must be followed.

Hot work must always be notified! Smoking is prohibited!

- The performance of any kind of hot work – e.g. work with a naked flame, welding, burning, angle grinding, etc. – is only permissible with a completed “hot work permit” (FB-AS 00800).
- An elevated risk of fire and explosion exists in the following areas:
 - Cold Mills including basement areas
 - Remelt
 - Scalper and places identified and marked with an elevated explosion risk
- In particular, aluminium dust deposits should be expected in remelt, e.g. near the induction furnace or chip handling systems. Aluminium dust may be ignited by grinding sparks. A dust explosion may occur when disturbed.

CO₂ is associated with a risk of suffocation – danger to life!

- The plant fire brigade must be notified before beginning work in areas protected by automatic CO₂ extinguishing systems.

- When warning sirens sound, leave these areas as well as basement areas, cable and pipe ducts immediately and assemble at the designated safe points. Separate instructions with evacuation plans exist for all extinguishing areas and these must be observed.
- At present, the following areas are protected by CO₂ extinguishing systems:
 - All Cold Mills including basement areas, suction channels, exhaust filters, individual transformer cells and the rolling oil filter room KW 5
 - Laboratory storerooms
- Only instructed personnel familiar with the local conditions may work in the extinguishing areas.
- Work on ladders (from a standing height of >1.5 metres), scaffolding, cherry pickers and similar in areas with active CO₂ extinguishing systems must be approved by the plant fire brigade/ safety department.
- Combustible waste including used cleaning cloths must be removed from the place of work every day and be properly disposed of.
- The placement of a pressurised gas bottle over an extended period (several days) must be coordinated with the plant fire brigade.

**Beverage cans, bottles and other containers
in combination with liquid aluminium
result in an extreme explosion hazard!**

- The instructions on the “handling of gas bottles, beverage cans and gas lighters” (SBA-000120) must be observed.
- In particular, the presence, use and disposal of beverage cans is strictly prohibited at the entire plant.
- Gas lighters may not be carried in or beneath work clothing or protective clothing.
- The following containers may only be used where absolutely necessary (the consent of the contractor coordinator is required):
 - Spray cans
 - Gas canisters
- Due to the risk of accident and explosion, it is strictly forbidden to discard containers – no matter whether full or empty – in scrap bins, waste metal bins, material stores or in furnaces.
- All substances and containers must be properly disposed of at the designated places. Beverage containers and gas lighters in particular may be disposed of in general waste only when empty.

6. Traffic safety

**Caution! Forklifts and cranes operate
in the production halls!**

- In principle, the rules of the German Highway Code apply at the premises.
- Unless otherwise stated, a speed limit of 30 km/h applies on the plant roads.
- The instructions on “distracting activities” (SBA-4.10.1.15) must be observed.
- Vehicles may only be parked in the designated or allocated parking spaces. Any unlawfully parked vehicles will be towed, the costs of which shall be charged. If possible, all vehicles should be parked in reverse to ensure maximum field of view when leaving the parking bay.
- For safety reasons, truck drivers must remain at the designated safe area (e.g. “green point”) during loading and unloading. The instructions of ALUNORF personnel must be followed.
- As a rule, it is forbidden to drive vehicles into the production halls. Only when absolutely necessary (e.g. for loading and unloading), a special permit may be obtained from the contractor coordinator for temporary access. Safe places to park must be chosen. Production operations must not be disrupted.
- Hazard warning lights and dipped headlights must be switched on in the halls.
- A speed limit of walking pace applies in the halls and loading/unloading bays.
- Loading and unloading using a mobile crane is only permissible with the consent of the contractor coordinator and after implementing the necessary safety measures.
- The consent of ALUNORF is required (“driving permit form for external companies” (FB-AS 00501)) in order to operate industrial mobile equipment.
- When using diesel vehicles in halls, measures for reducing diesel emissions must be taken where technically possible.
- As a rule, crane operations and rail vehicles have right of way. Special care must be taken when crossing rail tracks! Sufficient measures must be taken to ensure that they can be crossed without danger.
- The use of bicycles in the production halls is not permitted.
- The instructions on “rules of conduct for pedestrians” (SBA-4.10.1.10) must be observed.
- Work in the area of rail tracks (within 5 metres) is only permissible with a completed permit and at the instruction of the rail operations manager.
- Radio-controlled equipment, vehicles, cranes, etc. may have an adverse effect on radio frequencies used internally. The contractor coordinator must be notified of all possible sources of such disruptions in advance in order to coordinate any necessary internal measures.

Where there is a danger of falling, provide fall protection!

- Workplaces and traffic routes from a height of 1 metre must be secured appropriately where there is a danger of falling.
- Openings in the floor must be covered effectively or sealed off and marked accordingly.
- Removed grates and other floor coverings must be properly reinstalled immediately after ending work.
- The use of working platforms on forklifts is prohibited without exception.

7. Use of lifting equipment

- Cab-controlled ALUNORF cranes may not be used. Floor-operated ALUNORF cranes may only be used with the consent of the contractor coordinator and following instruction (“request for a permit for external company personnel to operate a floor-operated crane” (FB-AS 00502)).
- The use of personnel lifting devices for cranes is prohibited without exception.

8. Securing of machine equipment and switching operations

**Work in the danger area of machine equipment –
only following prior securing!**

- Before beginning work in the danger area of machine equipment, the securing measures must be carried out in accordance with the instructions “LOTO – securing of machine equipment against uncontrolled and unintended movement and dangerous effects of substances (supply media)” SBA-4.7.1).
- The application of LOTO is particularly important in this context. Lock-out is a securing measure in which hazardous energies/substances are shut off according to a defined procedural instruction for defined activities and secured against reactivation using personal locks. Tag-out is the documentation of this defined securing measure. In general, external company personnel may never execute a switching operation independently.
- Every affected employee must protect themselves using their own lock (e.g. personal lock, master lock).

**Never activate switching devices and fixtures
at your own discretion!**

- If voltage is to be applied to an electrical system constructed by the contractor, the contractor coordinator and their switching personnel must be informed of all switching operations intended by the contractor and the progress of assembly work. All switching operations (including test runs) may only be carried out by the contractor once the authorised member of staff for switching at ALUNORF has given their approval.

ALUNORF shall only assume responsibility for the securing measures of newly constructed or expanded systems following preliminary acceptance.

Systems undergoing testing must be marked as such, e.g. with red and white tape and a sign.

9. Alcohol, smoking and intoxicants

**Work under the influence of alcohol or drugs
is strictly prohibited!**

- It is strictly forbidden to access the plant under the influence of alcohol or intoxicants or to consume alcoholic beverages or intoxicants during working hours. Medication may also have an intoxicant effect and influence perception, etc.
- A general smoking ban applies at the entire ALUNORF plant, including all halls, buildings and rooms.

The following exceptions to the general smoking ban apply:

- Outdoor areas unless smoking is prohibited for other reasons (e.g. fire or explosion hazard)
 - Designated smoking areas within the halls
- Cigarettes must be disposed of in the designated receptacles. Improper disposal may result in an elevated risk of fire and explosion.

10. Excavation work

- Excavation work may only be performed after obtaining pit approval from the construction department.

11. Personal protective equipment

**The signs on wearing personal protective equipment
must strictly be observed!**

- The general requirement to wear head, eye, foot and hearing protection and long-sleeve work clothing applies in all production halls.

- For further regulations on wearing personal protective equipment, please see the safety instructions “PPE instructions (plant-related)” (SBA-4.8.2.1).
- In the case of work with hand-operated grinding and cutting machines (e.g. angle grinder), visors must be worn. The requirement to wear protective eyewear also applies.
- Jewellery and watches must be removed or concealed by wearing gloves or masked with tape in all production halls and workshops as well as at media facilities outside of designated footpaths and at operators’ stands. Further information can be found in the safety instructions “Wearing of jewellery and watches” (SBA-000079).
- Work clothing with reflective strips must be worn throughout the plant. If work clothing is not equipped with reflective strips, the employee must wear a warning vest appropriate to their area of work (e.g. flame retardant). This does not apply to work in whole-body protective suits worn on secured construction sites (e.g. cleaning work in casting pits, tanks or settling basins).

Only flame-retardant warning vests may be worn in the remelt.

- Welders’, casters’ or smelters’ protective clothing must be worn for work in the remelt. Casters’ or smelters’ protective clothing must be worn when working in the direct vicinity of molten metal.
- **Fall protection on crane tracks**

Restraint systems are set up to prevent falling accidents when inspecting crane tracks.

If personnel need to move along crane tracks, the existing restraint systems must be used. The maximum permissible number of employees per working area (between two hall pillars) must be observed.

Unauthorised persons are not permitted to access the crane tracks.

- **Fall protection on lifting platforms**

In the case of mobile lifting platforms, corresponding personal protective equipment against falls must be worn when using lifting platforms!

Unless otherwise stipulated in the manufacturer’s operating instructions, such equipment may be dispensed with in the case of vertical mast lifts and scissor lifts.

12. Emergencies and reporting of occupational accidents

- Dial 333 in case of emergency! The emergency number cannot be reached directly using a mobile phone. In such cases, dial 02131 937 8334 or 02131 937 334! (Tip: save one of these numbers as the ALUNORF emergency number in your mobile phone.)
- Accidents that occur at ALUNORF must be reported to the contractor coordinator and the medical station (phone 332) immediately with a description of the course of events leading to the accident.
- In addition, a detailed accident report must be submitted to the ALUNORF occupational safety department within five workdays for each accident involving medical treatment or lost working hours (time and place of the accident, type of injury, course of events leading to the accident, cause of the accident and the measures taken).

13. Use of working materials and hazardous substances

Observe the chlorine alarm plans in the remelt and Energy Centre 2.

- It is forbidden to use substances containing organosilicon compounds and other paint-wetting impairment substances in the area of the mills, as these may lead to reductions in the quality of rolled strips. In other areas, the consent of the contractor coordinator must be obtained for the use of such substances.
- Moreover, the substances must not contain any components of animal origin.
- The following substances may only be used with the consent of the occupational safety department:
 - Radioactive substances
 - Toxic and highly toxic substances
 - Environmentally hazardous and highly environmentally hazardous substances
 - Substances containing enzymes or microorganisms
 - Carcinogenic substances (CMR substances)
 - Substances relevant under the Hazardous Incident Ordinance
- Hazardous substances may only be stored temporarily at ALUNORF and only in the absolutely necessary quantity. If it is foreseeable that stored materials/substances of an external company will no longer be needed, these must be removed from the plant premises immediately. Any waste disposal duties remain unaffected.
- Safety data sheet and information sharing

Hazardous substances may only be brought onto the premises following prior registration with the contractor coordinator. The external company must also keep the current EU Safety Data Sheet available on site. In addition, the following information must be provided:

| | | |
|----------------|---------------------------------|---------------------|
| – Place of use | – Place of storage | – Type of container |
| – Quantity | – Duration of storage (planned) | |
- This regulation does not apply to small quantities up to 1 litre or to coating materials, adhesives and solvents up to 20 litres.

14. Handling of waste

Environmentally responsible conduct is required!

- It is forbidden to bring external waste onto the ALUNORF premises.
- It is forbidden to store waste outside of the designated containers. Especially if waste is placed in containers for the storage of aluminium scrap, an explosion may occur when loading in smelting furnaces!

- The external company is the waste producer within the meaning of the Closed Substance Cycle and Waste Management Act for all waste generated by the external company.
 - Therefore, the external company bears all responsibility for proper and lawful disposal (particularly in the case of construction work).
 - In the case of small quantities of non-hazardous waste, the waste bins provided by ALUNORF at the plant premises may be used in consultation with the contractor coordinator. The labelling on the waste bins must be observed:
 - Yellow bins: Residual waste
 - Blue bins: Paper/cardboard
 - Light-grey containers: PE films
 - Brown bins: Wood
 - Black bins: Steel strips
 - Red bins: Solid matter containing oil
 - No waste that represents hazardous substances or containers/packaging of hazardous substances may be disposed of in these bins. In particular, this applies to the following:
 - Lighting – Batteries – Spray cans
 - Capacitors – Paint cans
 - Packaging must be returned to the manufacturer/distributor in accordance with packaging law.
- Large quantities of waste must be disposed of by the external company itself. Typically, further details in this connection are laid down in the respective order.
- If the external company causes costs due to improper waste separation, the additional costs incurred to ALUNORF for collection, sorting, transport and harmful soil changes, etc. will be charged to the external company.

15. Protection of ground water and soil

- No substances may enter the soil, ground water or drainage system. In particular, this applies to oils and cleaning agents as well as cleaning water containing cleaning agents. As a rule, cleaning water may only be introduced into the sewer system (e.g. via sanitary facilities), not into open drains. The contractor coordinator and plant fire brigade must be informed immediately in the event of environmentally harmful incidents.
- In the case of activities with a particular risk of oils, etc. penetrating the ground, all precautionary measures must be taken to reduce the scale of the risk. In particular, a sufficient quantity of oil binding agents must be kept available and/or work must be performed in a sufficiently large collection tray.
- ALUNORF has separate drainage systems for dirty water and rainwater. Our wastewater is discharged directly into the Rhine. Cleaning water and oil therefore cause significant damage

in the rainwater drainage system and the operation of treatment plants and may not be introduced into the rainwater drainage system for this reason.

- The contractor undertakes to inform the client immediately in the event that the work of the contractor results in ground contamination (e.g. on sealed and unsealed surfaces) at the client's plant premises with substances, especially water polluting substances (e.g. spillage or leakage of oil, paint, solvents, etc.). At its own cost and following coordination with the client, the contractor shall arrange the comprehensive and unobjectionable removal of this contamination in a manner that leaves no residues whatsoever on or in the ground.

16. Plant safety

- The contractor undertakes to follow the plant safety instructions and to accept inspections of the contents of vehicle spaces, construction trailers, toolboxes, etc.
- The recording of image, audio or video material within the plant is not permitted without special approval. The use of image, audio or video material outside of official contexts (e.g. in social networks and media) is not permissible without the consent of corporate communications. As a rule, data protection requirements must be met and trade secrets upheld. The permanent storage of such recordings is only permissible on ALUNORF's own storage media.
- The Wi-Fi feature on personal mobile phones must be deactivated at the plant.

17. Safety absolutes – rules without exceptions

There are rules that permit no exceptions, as those who break these rules put their lives and the lives of others in danger!

- **Control of hazardous energies (LOTO):**
 - Before beginning work in the danger area of machines/equipment, all dangerous sources of energy must be securely shut off.
Secure shutoff means:
 - a) Disconnection of power supply for all types of energy
 - b) Removal or blocking of stored energy
 - c) Securing against unauthorised or accidental activation
 - All personnel must protect themselves from accidental activation using their personal lock.
 - Any deviations from this rule are only permissible when written instructions (e.g. SBA 4.7.1) expressly permit them.
- **Machine Safeguarding:**
 - No equipment with inoperable or defective protective devices may be used. Protective devices may not be removed, disabled or circumvented.
 - Any deviations from this rule are only permissible if work cannot otherwise be performed (e.g. troubleshooting) and a special written regulation or a written risk assessment has been drawn up with defined measures.

- While equipment is in use, personnel may not put their hands or other body parts in known crushing zones, pinching points or other areas in which they may be caught by moving machine parts.
- **Mobile equipment and pedestrian safety:**
 - Mobile equipment may only be operated by persons who hold a valid driving job (forklift licence) and have been instructed in the handling of such equipment.
 - Mobile equipment shall not be operated if any safety features are inoperable; e.g. lights, audible/visual warning devices, brakes, parking brakes, steering, etc.
 - Pedestrians and mobile equipment operators must establish eye contact and communicate with clear hand signals before approaching one another or crossing paths.
 - Mobile equipment operators must ensure an unobstructed view of the driving lane and drive at an appropriate speed.
 - Pedestrians and mobile equipment operators must pay attention to crane operations and maintain a safe distance from the crane or load.
 - If a pedestrian approaches the vehicle, e.g. to have a conversation with the mobile equipment operator, the vehicle must be secured against rolling, the load lowered and the motor shut off. Before driving away, the mobile equipment operator must ensure that the pedestrian has moved a safe distance away from the vehicle.
- **Confined spaces:**
 - A current “permit for work in containers and confined spaces” (FB-AS 00100) must be issued before beginning work and all protective measures described therein must be implemented.
 - The ambient air is measured before beginning work to ensure that no explosive atmosphere, no harmful substances and sufficient oxygen are present.
- **Safety of cranes and load-bearing equipment:**
 - Cranes may only be operated by persons who hold a valid driving job (crane licence) and have been instructed in the operation of the crane.
 - Cranes shall not be operated if any safety features are inoperable, e.g. upper/lower control limits, anti-collision equipment, audible/visual warning devices, etc.
 - Crane operators may not operate cranes if the load obstructs their view in the direction of transport and no signaller guides them.
 - Crane operators may not knowingly guide loads above persons. Pedestrians may not walk underneath suspended loads.
- **Prevention of molten metal explosions:**
 - No contaminations (e.g. closed containers, beverage containers, disposable lighters) may be introduced into scrap and dross bins or into metals designated for smelting.
 - Tools and equipment that come into contact with liquid metal may only be used if they are free from foreign matter, dry, rust-free and finished/coated.
- **Work at height:**
 - When working at height (1 metre or higher), personnel must secure themselves against falls (e.g. scaffolding, handrails, safety harness, tether).

- Fall protection devices and ladders/steps may only be used in good working condition.
- Ladders must be secured against slipping, be sufficiently long (1 metre above the step-off point) and be placed at an angle of 65–75°.

Keep a distance from all hazardous situations – an extremely high potential for risk exists in the case of (suspended) loads, vehicles, rotating machine parts, pinching points, etc.

Always stay out of the line of fire.

18. Liability

- The contractor must take out insurance at its own cost, which covers all liability cases that could arise in connection with the contract concluded with ALUNORF. The insurance must cover both personal injuries and material damages. Contractors shall be held fully liable for any damages that result from the non-compliance or breach of the “Safety and Environmental Instruction for External Companies”.
- This English translation is for informational purposes only. In case of doubt, the original German document shall prevail.

Breaches of the ALUNORF Safety and Environmental Instruction may result in permanent exclusion!