



BASIC OCCUPATIONAL HEALTH AND SAFETY GUIDE (OHS)

January 2020



**WHERE SAFETY IS CONCERNED, WE ALL
HAVE A ROLE TO PLAY**

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1 WELCOME TO UPM

Our aim at UPM is to run profitable and sustainable businesses in a responsible way. This requires us to focus on the safety of all those who work for the company and of those who interact with us.

At UPM we are committed to upholding and continuously improving a high level of management where Occupational Health and Safety matters are concerned.

If you are reading these lines it is because you are involved in our operations. Are you aware of the risks that your activities entail and of the control measures provided for your safety? Do you carry out the tasks which you agreed to do in a responsible way? We invite you to reflect and accept your role in helping to ensure that our activities remain as safe as possible.

It is our duty to communicate every Safety instruction and the risks related to the jobs carried out in our operations.

We expect our colleagues to use this information to ensure that their procedures and way of working are carried out safely and efficiently.

This guide, together with the training provided, will help you to improve your awareness of Safety at work. UPM staff will always be available to help you with any queries.

Never start a job until you have checked that it is safe for you, your colleagues and the environment.

**“NOTHING IS SO IMPORTANT, OR SO URGENT, THAT IT
CANNOT BE DONE SAFELY”.**

1.1 OCCUPATIONAL HEALTH AND SAFETY POLICY (OHS)

Guaranteeing Safety at work is a fundamental part of UPM operations. UPM also expects its contractors to show the same commitment to Safety.

UPM Uruguay adheres to the UPM Code of Conduct and prevention of unlawful acts, and agrees to follow the business area's Safety rules for all projects at its new pulp mill.

The following three Safety principles govern all UPM operations:

- 1. Safety first**
- 2. Safety starts with me**
- 3. Every accident is preventable**

Safety is the number one priority for everyone. The OHS goal for the project is to ensure that every employee involved in construction, works safely and in healthy conditions.

1.2 SAFETY PRINCIPLES AND GOALS

SAFETY FIRST

"Safety first" means considering Safety in everything we do. Operating under the principle that Safety cannot be considered less important than or take second place to any other interest, including output or profit.

SAFETY STARTS WITH ME

"Safety starts with me" underlines the importance of personal attitudes and every employee's commitment to work safely. At the end of the day, every individual is responsible for their own behaviour and their own safety.

EVERY ACCIDENT IS PREVENTABLE

We believe that we can prevent every accident, making Safety a natural part of our activities. We will achieve this by following the Safety principles, focusing on continuous assessment and learning, and making Safety an integral part of our business management system and daily activities.

1.3 SAFETY GOALS

The OHS goals for the project are:

- Zero fatal accidents
- Zero lost time accidents (LTA)
- Zero total recordable injuries (TRI)
- Zero Safety incidents



2 INTRODUCTION

This **Basic Safety Guide** contains instructions and rules that are applicable at all levels, and for all activities and jobs carried out on the UPM project.



It is a support tool for all workers, contractors, suppliers and interested parties, who must ensure that all staff under their control are aware of the contents of this Guide and must manage the correct implementation of the requirements established for each activity. These requirements are aligned with applicable national regulations and with UPM safe working standards.

In your role as a contractor, you are committed to provide a safe and healthy working environment for all your workers. Safe and healthy working conditions are an essential part of day-to-day operations and are used as performance standards for all jobs.

Everybody must comply with their role and lead aspects of Safety, abiding by all rules, instructions and regulations.

Every individual is obliged to act in a safe way.

We welcome initiatives taken by the companies that work on our operations regarding all areas of OHS.

Indifference or negligence regarding Safety will lead to work being observed, conditions being re-established and the continuance of those involved being re-evaluated.

3 EXPECTED OHS BEHAVIOUR

In order to prevent any incidents, all of us have a duty to abide with our roles and carry them out responsibly. Below we list the main behaviour we expect from you.



Behaviour of all workers

- * **Follow regulations**
- * **Express your opinion**
- * **Be aware**
- * **Get involved**

- I will strictly comply with the rules and I will always use the appropriate tools and procedures.
- I will inform any incident, observation or unsafe situation to my supervisor immediately.
- I will stop if there are doubts and will advise those who may be in danger.
- I will stay alert and be aware of the dangers generated by my activity and those around me.
- I will take part in trainings and will be involved in order to improve Safety aspects.
- I will share my knowledge about Safety with other members of the team.

“WE NEED ALL WORKERS TO PLAY A LEAD ROLE WHEN IT COMES TO OCCUPATIONAL HEALTH AND SAFETY”

Behaviour of supervisors

- * **Guarantee compliance**
- * **Motivate your team**
- * **Promote risk awareness**
- * **Involve the team**

- I will visit the work areas to guarantee compliance with working standards.
- I will help the team to solve the problems that production poses to Safety, guaranteeing that Safety is never compromised.
- I will know my team members' limitations and strengths.
- I will recognise good performance in terms of Safety and will act diligently when faced to any non-compliance in this matter.
- I will stop work when I see that it is compromised for safety reasons.
- I will re-evaluate the risks and dangers when changes to working conditions occur.
- I will support, train and involve the team in implementing improvements to safety aspects.

“SUPERVISORS PLAY A KEY ROLE WHEN GUARANTEEING COMPLIANCE WITH SAFETY STANDARDS ON THE PART OF THEIR WORK TEAMS”

Behaviour of managers

- * Establish high standards**
- * Promote open communication**
- * Tackle risks**
- * Be an active participant**

- I will focus on sustainable improvements to safety processes and I will monitor progress.
- I will constantly recognise good safety behaviour and I will challenge unacceptable behaviours.
- I will visit workplaces and will personally speak to employees and contractors about their concerns and performance regarding Safety.
- I will keep safety messages simple and direct, and I will explain its advantages.
- I will support ideas to improve safety performance and I will actively promote them.
- I will ensure that incidents are properly investigated, the conclusions are communicated and the relevant measures are taken.
- I will make sure that appropriate training and safety resources are available.

“EMPLOYEES BELIEVE THAT THE BEHAVIOUR AND ATTITUDE OF THEIR MANAGERS TOWARDS SAFETY IS ESSENTIAL. THOSE WHO DEMONSTRATE A COMMITMENT TO SAFETY AND ACT AS AN EXAMPLE GET BETTER RESULTS”

4 GENERAL INSTRUCTIONS

4.1 ACCESS TO UPM SITES

✓ EMPLOYEES

In order to access any UPM workplace, it is mandatory to meet every established requirement and carry out every necessary check to guarantee the safety of every person “on site”.



Once every requirement have been met, you will be given an **access card** that will identify you.

Important:

- Carry your card with you at all times while you are in the workplace. It may be requested at any time.
- Your card is not transferable and under any circumstances should you allow another person to use it.
- You may only enter the site via the access routes determined by UPM and may only gain access using the aforementioned card.
- If you lose your card, let your company or the access control office know.
- Keep the site tidy and in good order while you are there.
- Respect the Safety regulations provided and the signs showing warnings and/or prohibitions.
- Follow the indicated routes to move around the site.
- Do not cross areas to which you should not have access. Always go to your own place of work.



✓ VEHICLES

- UPM gives vehicles authorisation to enter different site locations according to the justified needs of users. This authorisation is granted by following an internal process whereby the vehicle is identified via coloured accreditations. Remember to respect these authorisations and do not enter areas to which you should not have access.
- Do not block entrances without authorisation. Manage your permits at the administration office in good time.
- Park in authorised places (defined parking bays).

- It is not permitted to transport people in truck beds, small vans or similar.
- Respect the traffic regulations.
- Respect the priority given to pedestrians and emergency vehicles.



PEOPLE
TRANSPORTATION
IS PROHIBITED



✓ ACCESS TO WORKSITE AT MONTEVIDEO PORT

- To access the works at UPM's Port Terminal, your company must previously have arranged the relevant permits. Without this permit you will not be able to enter the public area of Montevideo Port, and by extension you will not be able to access the UPM Terminal.

4.2 GENERAL AND HOUSE RULES

- **It is not permitted to use mobile phones** during the working day, except during breaks or for those people who need to use their device for daily reports.
- **It is not permitted to take photographs** or videos, other than when authorised to do so by UPM.



- **It is not permitted to stay in areas** where machines, vehicles or equipment need to transit.
- **Do not occupy places or areas that were not assigned to you by UPM.** People who are not undertaking any work activity should be in dining rooms or other authorised rest space.

- **It is not permitted to carry, store or be under the influence of alcohol or drugs.** UPM has a zero tolerance policy for alcohol and drugs, and has the right to carry out random testing. Consequently, everyone is liable to be tested, and any adverse (positive) results mean that the person in question will be forbidden from entering the site, and the relevant measures will be taken.



- **It is not permitted to smoke** in non-designated areas.

- **Act responsibly and stop work** when faced with an UNCONTROLLED situation of risk, always in communication with the person in charge of the task and analysing how the task is carried out, applying preventive measures to mitigate the risk.



- Always use the mandatory **personal protective equipment** in workplaces. Other equipments must also be used according to the task and associated risk.

- **Respect signage** that prohibits, requires or recommends certain things in the various areas at all times. Signage shall not be removed or moved without authorisation. Companies are responsible for putting up signs according to the risk and/or area to demarcate, and it is also their responsibility to remove this when it is no longer applicable.



- **Find out about the risks** and preventive measures for your role and/or for the tasks that you are entrusted with.
- **Only carry out** jobs for which you have been trained and/or are qualified.
- Use the **appropriate tools** for each job and use them safely.
- **Manage waste** in your work area and keep it clean and tidy.
- **Behave appropriately**, without causing annoyances or distractions that may put your colleagues or yourself at risk.
- **Avoid damaging** facilities or the environment.
- **It is not permitted to have an open fire**, cut down trees, hunt or fish.

- **Do not run** inside the facilities, and always hold the handrail when moving around staircases or access platforms.



- **In an emergency:**

- ✓ Do not block emergency and/or safety measures (extinguishers, fire hydrants, evacuation routes).
- ✓ Do not use lifts.
- ✓ Follow the instructions of staff who are in charge of managing emergency or evacuation situations.

- **Penalties for non-compliance:**

In order to guarantee the safety of every worker, UPM will apply the sanctions outlined in its procedures, which means the access restriction for people who have contravened the regulations and/or requirements established in this guide and/or in its internal procedures.

UPM may also act along the same lines, if necessary, at the request of service companies to apply such access restrictions. These measures are designed to prevent people from accessing their property whenever they DO NOT COMPLY with the required safety measures.

4.3 OCCUPATIONAL HEALTH

Your health is important to us, so it is important that you:

- ▶ Assess the risk and the environmental conditions to which you are exposed.
- ▶ Evaluate what elements, awkward postures, tools and/or chemical products you might be exposed to while performing your job.
- ▶ Let your supervisor know any health situation that may put safety at risk.



Remember:

- Do not use solvents for personal washing.
- Avoid contaminating your day-to-day work clothes. Protect it with specific protective equipment (e.g. suits).
- Wash your hands with plenty of soap and water before consuming food.
- Avoid wearing rings, watches or anything else that makes it difficult to be hygienic.



5 OHS PREVENTIVE TOOLS

At UPM we believe that all activities must have a risk assessment methodology.

Risks can be identified in procedures for planned activities and at other times for unplanned activities, which will have a simple risk assessment.

Contractors must always inform UPM about these assessments and any updates made to them. The assessments and measures put forward must always be acceptable. We cannot have INTOLERABLE risks.

Below, the risk assessment management model is shown:



This risk assessment methodology must consider at least the following:

- Analysis of the task, always giving consideration to minimising risk.
- Identifying the risks regardless of their consequences (consider interference, climatic conditions, etc.).
- Proposing preventive measures that reduce the risk (use of PPE, collective protection, safe work instructions, etc.).
- Assess the risks according to their probability and consequences, before providing information to the workers concerned.

When there are risks in the following activities:

- Works in confined spaces.
- Hot works.
- Working in hyperbaric atmospheres (with a greater influence of oxygen).
- Erection works.
- Working on superimposed and/or shared construction.

The risk assessment will be carried out via a **WORK PERMIT** for that activity.

The work permit is a preventive tool that allows us to assess the risks associated with a specific task, and to check the effectiveness of the control measures.



This permit, by blocking and/or isolating a power source (mechanical, electrical or other), ensures that it is possible to work risk-free on a piece of equipment/system for

the period that the permit states.

A work permit only provides authorisation for the task that it describes, and not for other similar jobs.

When the task has a high potential for serious or very serious accidents, every specific and timely measure that need to be applied will be defined. For example, putting a guard in place to prevent people from passing through a particular area, putting up a special fence, a net or protection.

EACH COMPANY MUST MANAGE THEIR OWN WORK PERMITS

6 PERSONAL AND COLLECTIVE PROTECTIVE EQUIPMENT

For this section, it is important that you know what a piece of personal protective equipment (PPE) is and what collective protective equipment (CPE) is, what are they protecting you from and what recommendations/instructions go with them.



DEFINITION OF PPE:

This is the name given to any piece of equipment designed to be worn or held by workers so that it protects them from one or more risks that may threaten their safety and/or health. (e.g. helmet, gloves, goggles, etc.)



DEFINITION OF CPE:

As opposed to the definition above, this is the name given to safety techniques that are aimed to protect simultaneously several workers exposed to a given risk. (e.g. lifelines, railings, protective nets, etc.)

THE USE OF THIS EQUIPMENT DOES NOT PREVENT ACCIDENTS, IT RATHER HELPS TO PROTECT YOU FROM THEM BY REDUCING THEIR CONSEQUENCES

As a general rule, you should know that:

- All PPE must meet recognised regulations or standards in order to ensure the quality of the protection they provide.
- They play a specific role in protecting users from risks, and this depends on correct use, choice and size.
- It is the employer's responsibility to hand out all PPE.
- Your responsibility as a worker is:
 - ▶ To look after them
 - ▶ To use them correctly
 - ▶ To keep them in good condition, without alterations
 - ▶ To regularly check their condition
 - ▶ To request replacements from your employer according to their usage and deterioration

PERSONAL PROTECTIVE EQUIPMENT (PPE)

SAFETY HELMET

- Its purpose is to protect you from the risk of head injuries.
- It is mandatory to wear one throughout the worksites, except in staff service and rest areas (e.g. bathrooms, dining area, offices, changing rooms).
- For work at height it is mandatory to use a chin strap to ensure that it does not fall off.
- Do not modify it and ensure it is worn and adjusted correctly.



SAFETY SHOES

- Its purpose is to protect your from occupational risks. (e.g. falling objects, bangs, piercing by sharp objects, etc.)
- It is mandatory to wear it throughout the worksites.
- Different types of footwear are mandatory depending on the danger to which you are exposed (e.g. PVC boots with a toecap, to protect yourself from water, mud, concrete, etc.).
- All footwear must have an anti-perforating sole in order to reduce the likelihood of injuries from sharp objects.
- For electrical work, footwear must not have a metallic toecap.



HIGH VISIBILITY PROTECTIVE CLOTHING OR SAFETY VEST

- Its purpose is to make you visible, reducing the risk of being run over, and/or to wear while handling vehicles, machinery or equipment.
- It is mandatory to wear one throughout the worksites except in staff service and rest areas (e.g. bathrooms, dining area, offices, changing rooms).
- The clothes and/or vests must be designed using high visibility material (protection during daylight hours), and reflective material (protection during the night or in low light).



YOU MUST WEAR LONG-SLEEVED WORK CLOTHES

EYE PROTECTION (Safety glasses, goggles, face screen)

- Its purpose is to protect you from the risk of projectile particles.
- Safety glasses must be worn throughout the worksites except in staff service and rest areas (e.g. bathrooms, dining area, offices, changing rooms).
- For grinding tasks and/or tasks where there is a risk of splashing with chemical products, it is **mandatory** to use double protection (safety glasses or goggles + face screen).
- Washing this equipment only in water will guarantee its maintenance and effective protection.
- Prescription glasses are not considered to be protective unless specified otherwise.



HAND PROTECTION (gloves, gauntlets)

- Its purpose is to protect you from the risk of bangs, cuts, piercings and burns that can happen when handling tools, sharp/cutting materials and chemical substances.
- The choice of glove depends on the risk against which you require protection. There are gloves that offer mechanical protection, chemical protection, protection against high temperatures, electrical, etc.
- Choose the appropriate size and type according to the risks involved in your task. Request a replacement when they are no longer in a suitable condition.



EAR PROTECTION

- Its purpose is to protect you from noise in the work environment and thus avoid hearing damage caused by high noise levels.
- Ear protection can be in the form of ear muffs (external protection) or in-ear devices (protective plugs).
- Noise is a potential risk that can cause long-term irreversible damage. This is why it is important to use protection when in high noise level environments (above 80 decibels).



RESPIRATORY PROTECTION

- Its purpose is to protect you from the potential risk of intoxication due to being exposed to contaminants (gas, vapour, dust, smoke or others).
- The choice of protection and its filters shall be made according to the type of contaminant, and type of compounds.
- In all cases it is important that:
 - ✓ You correctly adjust the respiratory protection.
 - ✓ You do not leave the protective equipment exposed when not in use (keep it in a bag or similar to ensure that it does not get contaminated).
 - ✓ The equipment provides limited protection when faced with high concentrations.
 - ✓ You check with your supervisor or Occupational Health and Safety adviser about the choice and use of equipment.



FALL-ARREST SYSTEM (Safety harness)

- Its purpose is to protect you from the risk of falling from height.
- Its use is mandatory for every work at height (above two metres).
- Its use may also be mandatory for working in confined spaces, where it may be necessary to rescue the worker from an emergency situation.
- The following must be considered when it is used:



- ✓ It is mandatory for the harness to be fastened above two metres, including while moving to the final working position (ascent and descent).
- ✓ A full harness with double hook fastening line is mandatory for every work at height.
- ✓ Ensure the harness is correctly fitted to your body.
- ✓ Fasten the harness to a fixed point that can resist free fall (distance and weight). It is forbidden to fasten it to a questionable point of resistance.
- ✓ Always fasten to a point above your shoulders.

**OTHER PERSONAL PROTECTIVE EQUIPMENT IS
REQUIRED FOR SPECIFIC RISKS**

COLLECTIVE PROTECTIVE EQUIPMENT (CPE)

FALL-ARREST SYSTEM

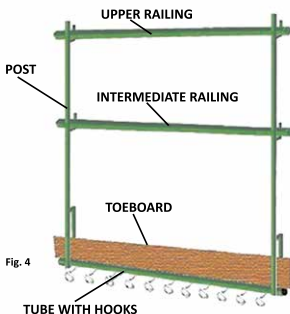
- Its purpose, together with a fall protection system (harness), is to protect you from the risk of falling from height (e.g. horizontal lifeline).
- There are different types of anchor, but the most important things to consider are:
 - ▶ That it is safe, offering a guarantee of reliability to users.

- ▶ That it must be appropriately resistant for the worker(s) that will be attached to it.
- ▶ That it enables movement at all extensions and/or fastening (it cannot be broken).
- ▶ You must NEVER modify an anchorage system without the authorisation of your supervisor, nor should it be used as an anchoring system for loading materials, tools, etc.

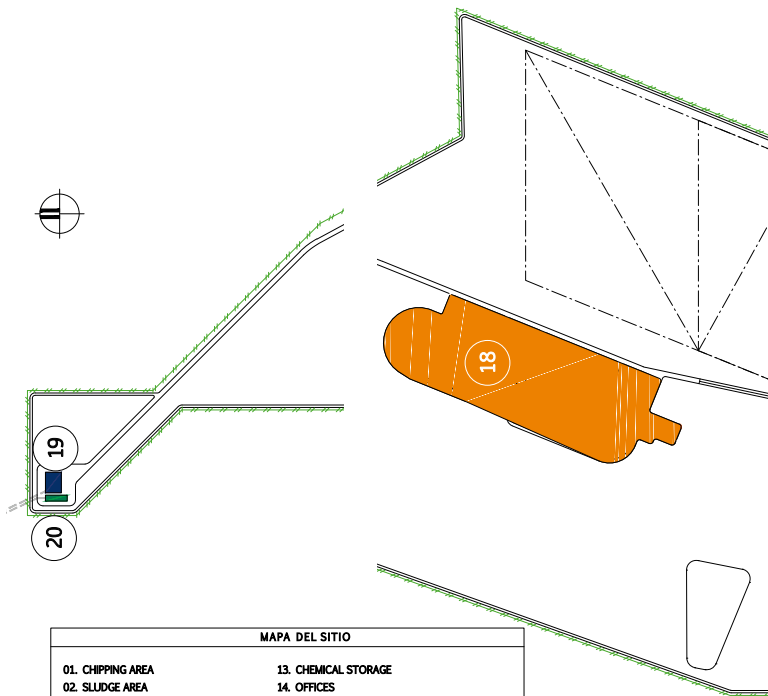
REGULARLY CHECK THE CONDITION OF YOUR ANCHORAGE SYSTEM

PROTECTIVE BARRIERS/RAILINGS

- Their purpose is to protect you from the risk of falling into depths or from height.
- They are placed on platforms such as scaffolding, holes, flooring, excavations, and so on.
- Their proper functioning depends on:
 - ▶ Solid assembly that is capable of resisting a person being pushed against it.
 - ▶ There must always be two protective railings. The intermediate railing will be placed at an equal distance between the two.
 - ▶ On platforms (scaffolding), a baseboard will be used to prevent objects from falling.
 - ▶ It is FORBIDDEN to remove them. Only appropriately qualified/ authorised staff may do so.

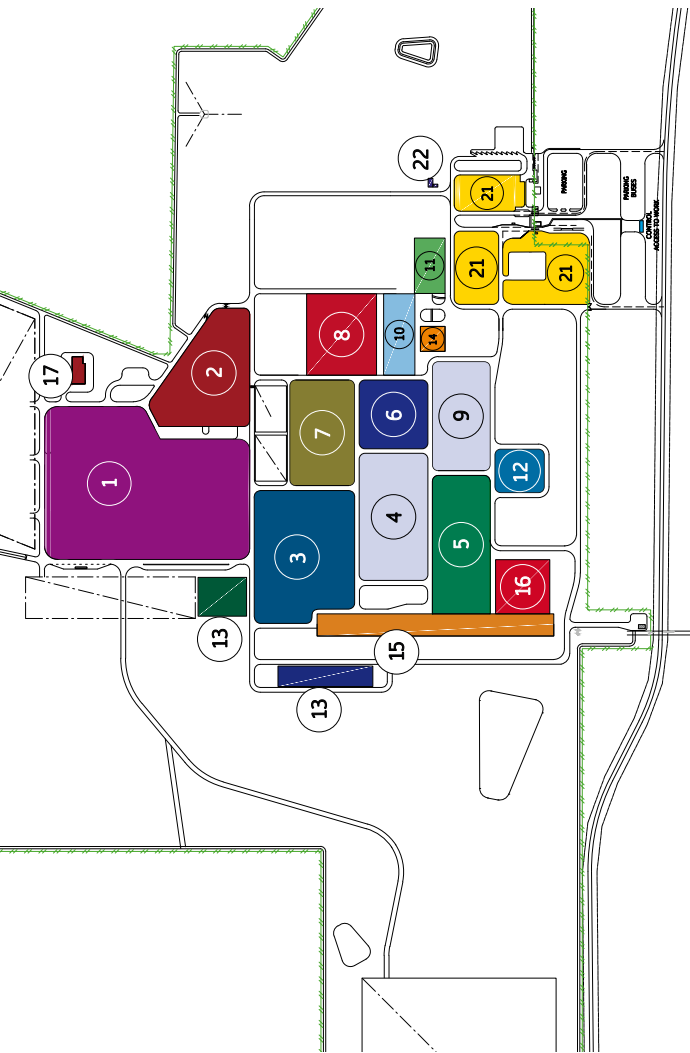


MILL SITE MAP



MAPA DEL SITIO

- | | |
|----------------------------|---|
| 01. CHIPPING AREA | 13. CHEMICAL STORAGE |
| 02. SLUDGE AREA | 14. OFFICES |
| 03. CHEMICAL PLANTS | 15. BALE LOADS |
| 04. WATER TREATMENT | 16. BAILING STORAGE |
| 05. DRYING AREA | 17. MOBILE EQUIPMENT MAINTENANCE |
| 06. EVAPORATION | 18. EFFLUENT TREATMENT PLANT |
| 07. RECAUSTIFICATION PLANT | 19. RAW WATER PUMPING |
| 08. RECOVERY BOILER | 20. COOLING WATERS |
| 09. FIBER LINE | 21. OFFICES AND TEMPORARY WORK SERVICES |
| 10. TURBINE | 22. NURSERY AND FIREFIGHTERS |
| 11. WORKSHOPS | |
| 12. OXYGEN PLANT | |



GENERAL PULP MILL
SCALE 1:7500

7 SAFE WORKING PROCEDURES

INTRODUCTION

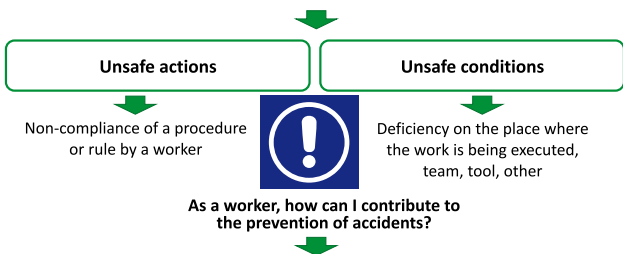
Below, for the main critical jobs that may generate high potential incidents, we summarise the following:

- Main risks and dangers generated by the activity.
- Main preventive measures to be applied.
- Special requirements or considerations.

Your safety and that of your co-workers will depend on compliance with these requirements established for each safe job.

What do we expect from you? Work safely and be proactive regarding prevention.

WE ALWAYS BEHAVE SAFELY AND ELIMINATE THE RISK



OF ACCIDENTS

- Informing my superior whenever I come across unsafe working conditions.
- Correctly planning our jobs.
- Assessing risks and applying risk control tools (e.g. safe working analysis or others).

- Establishing preventive measures and always adhering to them.
- Raising awareness, learning and training.
- Wearing PPE correctly.
- Using CPE correctly.
- Following the provisions of guidelines or working procedures.
- Being proactive regarding Safety.

7.1 WORKING AT HEIGHT

DEFINITION:

Any task that is carried out above **2 metres** from the base or support, or where there is a slope that is greater than **2 metres** and generates a possible risk of falling.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Falling from a different level	<ul style="list-style-type: none"> • Incorrect work platform • Platform collapse due to overloading/poor anchorage • Incorrect assembly of a platform 	<ul style="list-style-type: none"> • Adverse weather conditions • Lack of and/or misuse of safety harness
Falling at the same level	<ul style="list-style-type: none"> • Untidy work platform 	<ul style="list-style-type: none"> • Unevenness of work platform
Falling materials	<ul style="list-style-type: none"> • Untidy work platform • Equipment and/or tools not fixed 	<ul style="list-style-type: none"> • Insufficient identification of work area

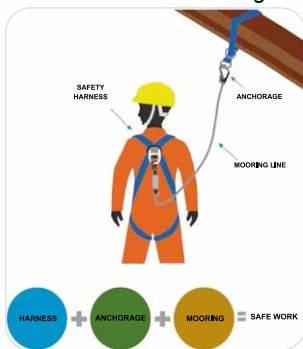
GENERAL REQUIREMENTS TO BE CONSIDERED

To work at height it is critical to:

- Wear a full harness, which must always be attached to a resistant structure that will prevent free falling.
- Wear a hard hat with chin strap to prevent it from falling off.
- Always use a fall-arrest system in good conditions.
- Always signpost the area below tasks carried out at height.



- The mooring lines must have large carabiners and be doubly safe.
- The mooring line must always be attached to a life-line, or to a structure that allows it to support the weight of a falling person.
- The coupling and its fastening should preferably always be above shoulder height.
- For work above 6 metres, the equipment must include a shock-absorber.



- Before using your harness each time, you must check:
 - ▶ The condition of the fixings (possible cuts, deformations, crushes).
 - ▶ The state of the hooks (broken safety catch, deformations).
 - ▶ The state of metal rings or eyes (cracks, deformations, dents or buckling).

- The PPE used for working at height (safety harness), must be stored so as to avoid conditions that might cause damage to them.
- Vertical lifelines are for individual use.
- Horizontal lifelines should be used for a maximum of 2 people at a time.
- You should choose your PPE and accessories according to the work at height that you are going to carry out.



Below we will look at some types of work at height, using different equipment, and the requirements that you must meet:

REQUIREMENTS FOR THE USE OF SCAFFOLDING

As a scaffolding user/builder, you must comply with the requirements listed below:

Builders must have the following documents for building scaffolding: plan, technical calculations, technical instructions for assembly and disassembly.

These documents must be certified by qualified staff and presented to the General Labour Inspectorate (*Inspección General del Trabajo* [IGTSS]).



- The contractor (user and/or builder) must put up or use the scaffolding in accordance with the technical instructions and apply a **scaffolding label**, as shown in the image below.

In this way, users will use it as long as it is displaying a GREEN authorisation card.

The cards must also indicate the name of the company, the person responsible for implementation, and the date.

AUTHORISED SCAFFOLDING	GREEN CARD Indicates that they are authorised	UNAUTHORISED SCAFFOLDING	RED CARD Indicates that they are not authorised for use
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- Scaffolding should only be designed, built, dismantled, moved or modified by trained staff (builders).
- Its assembly should have at least the following:
 - ▶ Minimum platform width (0.6 m).
 - ▶ Baseboard and railings.
 - ▶ Solid base, preferably adjustable.
 - ▶ Stability (bracing in order to stop it from falling down).
- Keep the platform tidy.
- Go up and down using the scaffolding ladders.
- Check the condition of your personal protective equipment, lifelines and other equipment related to working at height on a daily basis.



- Scaffolding on wheels must have a braking system that prevents it from accidentally moving. If there is a need to move it, this should be done **without personnel** on the scaffolding.
- Scaffolding on easels or platforms may not be set above 2 metres high and should never be exposed to the risk of falling into holes, windows, balconies or similar.
- Hanging scaffolding should be handed over by the companies responsible for assembly, guaranteeing their correct use. These hanging scaffolds, via their safety systems (brake system and auxiliary lifeline), should guarantee free fall and rescue in an emergency. Their counterbalance system must be made up of uniform materials (e.g. concrete blocks).



PROHIBITIONS

- Do not use ladders on the platform and do not lean on the railings.
- Do not overload the platform with bricks or other materials.
- Remember that it is forbidden to use scaffolding that does not have a GREEN authorisation card.

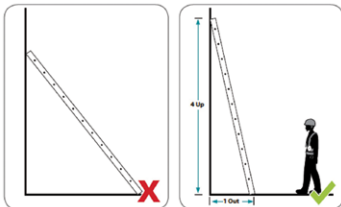
WHENEVER WORK IS BEING CARRIED OUT ON A PLATFORM AT HEIGHT, THE AREA BELOW MUST BE SIGNPOSTED

REQUIREMENTS FOR THE USE OF LADDERS

- Ladders are not permanent work platforms, and as such their use for jobs should be limited to ascending and descending to or from heights.
- Ladders must be braced both at the base and at their upper end to ensure that they do not slip, or they should be supported by a person.
- When going up or down always keep three fixed support points (feet and both hands).
- Go up or down without materials or tools in your hands.

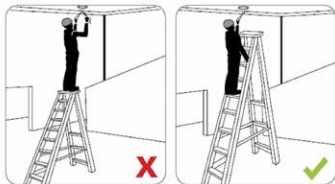


- Ladders must be certified, in good condition and authorised for use.
- Ladders for electrical work must be made of fibreglass.
- Ladders to enter fixed platforms must go beyond the access point by at least 1 m.
- The base support point must be at a maximum distance from the wall, $\frac{1}{4}$ of the length of the ladders.
- Folding ladders must have a fixing system (cord) where the two pieces join to ensure that they do not suddenly open, and should be used in accordance with their design.
- Ladders must have a revolving safety base and anti-slippery supports.



PROHIBITIONS

- It is forbidden to use wooden ladders. Only fibreglass or metal ladders are permitted.
- Ladders may not be used for jobs above 7 m high.
- Ladders should not be used to load heavy objects.
- Neither the top part nor the last two rungs should be used to bear your weight.
- Never lean over the sides further than the length of your arm.



REQUIREMENTS FOR THE USE OF EQUIPMENT FOR LIFTING PEOPLE

This is the name given to equipment that is specifically used for lifting people to reach places that are high up.



The design of these equipments differs depending on the job to be carried out.

To operate and use this equipment you should meet the following requirements:

- Be authorised/qualified to handle it.
- The equipment should identify its maximum load capacity via a plaque or similar.
- All equipment should have an operating and Safety manual for operators to consult.

- All lifting equipments should be certified.
- The equipment should be used according to its design (do not add anything that may increase the load and the height for which it was built).
- While in use you should be attached to the equipment with the safety harness.
- The equipment and accessories should be used for the purpose for which they were designed, built, accepted and maintained.
- Check the maneuvering radius to avoid any incidents and do not turn sharply with an elevated load.
- Check that the support location and/or condition are stable.
- **WARNING:** holes in the ground may cause the equipment to tip over.
- Consider limiting the use of the equipment in adverse weather conditions (wind, rain).
- Signpost the area below the work to avoid hitting people who are not involved in the maneuver.

PROHIBITIONS

- Do not abandon the equipment and/or leave it running without control.
- Do not stand on the protective railings of the basket of the lifting equipment.
- Do not make sudden stops when the platform is elevated.
- Do not overload platform or load it unevenly.



7.2 EXCAVATION WORKS

DEFINITION:

EXCAVATION WORKS are considered to be all activities needed to cut, move or extract a section or volume of soil manually or mechanically.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Falling from different/same level	<ul style="list-style-type: none"> • Lack of identification and/or protective railings • Lack of and/or deficient platform to access or exit the excavation 	<ul style="list-style-type: none"> • Untidiness and/or accumulation of materials close to the excavation • Lack of lighting
Explosion, electrical risk	<ul style="list-style-type: none"> • Due to breaking/cutting underground lines (electrical or other) 	
Becoming trapped due to falling materials or equipment	<ul style="list-style-type: none"> • Due to collapse and/or accumulation of materials, poor stacking • Unsecured tools close to the excavation 	
Being run over	<ul style="list-style-type: none"> • Due to using mobile equipment in the working area 	

GENERAL REQUIREMENTS TO BE CONSIDERED

Many accidents related to excavation works happen as a result of poor planning.

To avoid such accidents, it is important to comply with certain requirements:

- Remember that any excavation deeper than 1.5 m needs an Excavation Plan signed by a civil engineer or architect, which covers at least the following:
 - ▶ Features of the ground.
 - ▶ Identification and interference procedure for underground services.
 - ▶ Need for underpinning (if applicable).
 - ▶ Definition of evacuation routes.
 - ▶ Description of the work in terms of traffic in the area, embankments or ramps, etc.

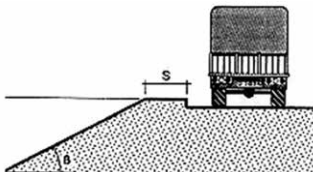
This plan should summarise all the control measures associated with the excavation works.



- Excavations must be protected with barriers and/or be signposted with the risk and the name of the company responsible for carrying out the work.
- Have ladders that come at least 1 metre out of the edge of the excavation for entry/exit, which will also be considered as escape routes.
- Check the conditions of the excavation before entering, after rain or a work interruption period (remove the collapsible edges).
- Define the PPE to wear and the use of measuring equipment if there is a potential presence of gases inside the excavation.

PROHIBITIONS

- Do not gather material from the excavation close to or on the edges of it.
- Do not work with mobile equipment close to the edges of the excavation while there is personnel inside it.
- Do not use other means of entry or exit from the excavation. Use the ladders or other means provided for such a purpose.
- Do not use combustion equipment inside the excavation that could pollute the atmosphere.
- Do not work in the excavation if there is water in it.



**COMPLY WITH ALL THE SPECIFICATIONS OUTLINED
IN THE EXCAVATION PLAN**

7.3 WORKING WITH MOBILE EQUIPMENT

DEFINITION:

WORK WITH MOBILE EQUIPMENT is any activity with equipments moving between different locations while performing a function. This movement can be made by wheels, rollers, runners or other, and can involve exchanging equipment to change its function.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Being run over	<ul style="list-style-type: none"> • Equipment and/or machine not working properly • Operator and/or worker being distracted in the area of influence 	<ul style="list-style-type: none"> • Use of equipment by NON-QUALIFIED/ UNTRAINED staff
Overturning	<ul style="list-style-type: none"> • Ground in poor state • Inadequate condition of the equipment 	<ul style="list-style-type: none"> • Inappropriate speed • Lack of analysis of the manoeuvre
Crash	<ul style="list-style-type: none"> • Inadequate condition of the equipment • Lack of analysis of the manoeuvre 	<ul style="list-style-type: none"> • Use of equipment by NON-QUALIFIED staff • Inappropriate speed

GENERAL REQUIREMENTS TO BE CONSIDERED

Many mobile equipment facilitate work at heights and make them accessible.

Such equipment tends to be safer as long as the following requirements are taken into account:

- You may only use mobile equipment if you are qualified, accredited and trained to do so.
- These equipments should always be used according to their design.
- They should all have the instruction manual either on the equipment and/or available for operators.
- Before starting your shift as an operator, check that the equipment is in good conditions (activating gears, braking systems, back-up alarms and so on).
- Manage repairs or maintenance whenever needed.
- Check environmental conditions (interference from other work fronts, structures, floor condition, etc.).
- If attaching an auxiliary piece of equipment, it should be recognised and accepted by the manufacturer (e.g. digger, staple, fork, extendible arm, bucket or similar).
- **NOTE:** If you need to use auxiliary devices that have not been recognised by the manufacturer, check with your company's Safety department.
- Equipment should have a corresponding, current technical verification.
- Outline work and transit areas to reduce risks.
- Choose the equipment depending on the task to be carried out, taking into consideration the capacity and configuration established by the manufacturer.
- Use lights and/or beacons whilst the equipment is moving.



- When descending from the equipment, you should always:
 - ▶ Stop the engine.
 - ▶ Activate the braking system, and when necessary, use devices to block the wheels.
 - ▶ Remove the contact interrupter.
 - ▶ Ensure that working devices are in rest position (e.g. digger or fork).
 - ▶ Support elevated loads on a safe surface.
- If using equipment for lifting people, remember to use a safety harness from 2 metres.
- Comply with traffic regulations for mobile equipment (e.g. forklifts):
 - ▶ Wear a seatbelt.
 - ▶ Warn staff in the area about your presence and use of the equipment.
 - ▶ Drive and maneuver slowly.
 - ▶ Avoid reversing. Always warn pedestrians.
 - ▶ Drive with the mast facing backwards and forks down, with the load duly prepared.



PROHIBITIONS

- You are forbidden from transporting personnel if the equipment is not designed for this.
- Do not raise or lower the load while the equipment is moving.
- Never access the platform via the fork or via the arm, and do not attempt to access the equipment while it is moving.
- Do not climb or sit on the railings or put any extra support or ladders on the floor to gain height.

- Do not get down from or leave the equipment while it is moving or operational.
- If you need a trailer, do not use a cable sling. Use safe devices (e.g. specially designed bars) and from the anchorage points from the equipment's design.
- Do not use automatic lifting equipment for transporting or hoisting people.

**DO NOT OPERATE EQUIPMENT IF YOU ARE NOT
QUALIFIED AND ALWAYS CHECK ITS CONDITION
BEFORE BEGINNING YOUR SHIFT**

7.4 WORKING WITH LIFTING EQUIPMENT AND RIGGING

DEFINITION:

WORK WITH LIFTING EQUIPMENT AND RIGGING comprises lifting a load or object using various auxiliary elements that make up a load elevating system or equipment. The elements differ depending on the job or load to lift.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Entrapment	<ul style="list-style-type: none"> Inappropriate positioning of hands or parts of the body 	<ul style="list-style-type: none"> Incorrect working position
Collapsing/ overturning	<ul style="list-style-type: none"> Poor ground assessment Incorrect positioning of the equipment Incorrect lifting plan 	<ul style="list-style-type: none"> Overloading Lack of maintenance on equipment
Objects falling	<ul style="list-style-type: none"> Non-compliant auxiliary elements 	<ul style="list-style-type: none"> Incorrect fastening of things to be lifted

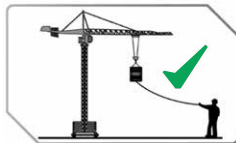
GENERAL REQUIREMENTS TO BE CONSIDERED

Before starting a lifting job, you should plan the work and bear in mind at least the following:

- ▶ Equipment to use (crane truck, mobile crane, or other).
- ▶ Load capacity of equipment to be used.
- ▶ Auxiliary elements to use (belts, shackles, hooks, etc.).
- ▶ Lifting place or area (due to possible interferences and/ or its condition).

The success at work will depend on correct planning.
Before you start lifting, you should:

- Draw up a lifting plan and the corresponding risk assessment.
- Ensure that those involved are qualified and/or accredited.
- Have the certificates for the equipment you are going to use (crane towers, mobile cranes, loader cranes, etc.).
- Signpost and outline the risk area during the manoeuvre, and remove it immediately when the work is finalized.
- Define and inspect all the lifting equipment and elements in advance (hooks, slings, shackles, etc.).
- All auxiliary elements to be used must clearly and legibly show the maximum working load.
- Consider weather conditions and the working environment.
- Use a guide rope attached to the load to ensure you keep a proper distance from the load.
- Define the roles and responsibilities of those involved (signaller, lift supervisor, crane operator, etc.).
- Establish how the team will communicate.
- Establish the method of securing the load.
- Define the route of the lift, bearing in mind possible obstacles.



- Before lifting the load, check:
 - ▶ That the load is correctly maintained.
 - ▶ The centre of gravity.
 - ▶ That the equipment/ crane or other is stabilised.
 - ▶ The weight of the load.
 - ▶ Possible sharp edges (avoid lifting using these edges and/or protect them with edge covers).



Considerations when slinging the load:

- ▶ Respect the angle of the sling in relation to the load.
- ▶ Position the guide rope.
- ▶ Check whether the wind speed allows for the lift.
- ▶ Remember that hooks should be correctly latched.
- ▶ The belts have been designed to work only on traction and not torsion. Do not expect this condition of use.



PROHIBITIONS

- You must never stand or remain underneath suspended loads.
- Do not exceed the admissible load limits of the system as a whole (crane or lifting equipment and auxiliary elements).

- Do not use auxiliary elements (shackles, chains, slings or other) when they are damaged. It is important that these elements are stored away from areas containing abrasives or oils/fats.
- Do not use belts on sharp edges without edge protection.
- Do not use synthetic or gauze belts if they are showing cuts or repairs.

CARRY OUT A PRE-LIFT BEFORE STARTING THE LIFTING WORK AND OBSERVE THE STABILITY, CENTRE OF GRAVITY AND CORRECT SLINGING

7.5 WORKING WITH MACHINERY AND TOOLS

DEFINITION:

WORK WITH MACHINES AND TOOLS is any activity in which instruments are used to carry out a specific function or job. Many of them make work easier and reduce the effort needed, but they can generate uncontrolled risks when used incorrectly or when in poor condition.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Cuts/bangs	<ul style="list-style-type: none"> • Incorrect use of the tool • Incorrect working position 	<ul style="list-style-type: none"> • Incorrect choice of tool
Electrical	<ul style="list-style-type: none"> • Defective electrical protection • Defective connection cables 	<ul style="list-style-type: none"> • Lack of thermal/ differential protection
B e c o m i n g trapped	<ul style="list-style-type: none"> • Incorrect positioning of the tool • Lifting the tool roughly 	<ul style="list-style-type: none"> • Lack of physical protection on the tools • Use of loose clothing, loose hair or other

GENERAL REQUIREMENTS TO BE CONSIDERED

The following essential rules for working with manual and/or electrical tools must be taken into account:

- All tools and/or equipment that you use must be in good conditions and well maintained.

- Maintain protective elements as per their original design.
- Only competent staff should carry out regular checks to verify suitability for use.
- Only use tools and/or equipment if you are instructed and trained in how to use them.
- Only use them for its original purpose.
- Use appropriate personal protective equipment.
- Prevent these pieces of equipment from starting unexpectedly.
- Only perform maintenance tasks if you are trained to do so.
- If a piece of equipment shows signs of faults, stop work and arrange for its maintenance/repair.
- Reduce the risk of becoming trapped by not wearing loose clothing, watches, rings, chains or any other item that is unnecessary for your work.
- Whenever replacing a machine accessory, ensure that it is disconnected from its power source.
- When working at height, ensure that they do not fall to lower levels.



PROHIBITIONS

- It is not permitted to modify or remove protective elements.
- Do not carry sharp or cutting tools in pockets.

**USE TOOLS CORRECTLY AND FOR THE PURPOSE
FOR WHICH THEY ARE DESIGNED**

7.6 ELECTRICAL WORK

DEFINITION:

ELECTRICAL WORK is every work in which a source of electrical power is involved and that generates a risk of electrocution. The seriousness of the risk will depend on its potential, the resistance and contact routes of the body.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Electrocution	<ul style="list-style-type: none"> • Incorrect isolation of equipment or machinery • Lack of electrical protection (differential circuit breaker, thermal) • Missing or incorrect grounding of equipment or facilities 	<ul style="list-style-type: none"> • Lack of skills of the maintenance staff • Not securing and/or isolating the power source when operating

GENERAL REQUIREMENTS

- All electrical facilities (in workrooms, workshops or elsewhere) must comply with National Regulations on low voltage.
- These must be referenced in a technical report issued by a UTE-registered electrician (electrical report) and any modification must be documented in new revisions to said report.
- All work on electrical facilities should ideally be done without voltage.

- To carry out a job without voltage you must always follow the **5 golden rules:**
 1. Disconnect the equipment or facility from any power source (visible or effective cut).
 2. Secure the voltage cutting elements using blocks and signage, to avoid any potential accidental reconnection.
 3. Check (with appropriate verified equipment), that there is no voltage in the electrical facility.
 4. Earth and short-circuit the conductors where you will be working (it is recommended in low voltage facilities and mandatory for high voltage).
 5. Protect the working area from other voltage areas using signage and/or beacons.

- The facilities' protective measures must be in accordance with the relevant risk assessment (connection to the ground and protective electrical devices).
- The whole electrical network, used to operate facilities, equipment, machines and tools, must be protected by automatic earthed circuit breakers (30 mA differential circuit breaker).
- Only electricians are authorised to set up and repair electrical cables and equipment.
- Ensure that cables are appropriately placed and are protected from mechanical damage.
- Avoid having cables on the floor. Ensure that people and equipment do not walk over the cables. Cables should be as short as possible.
- If possible, avoid carrying out electrical work during adverse weather conditions.
- Sockets and cards must have at least IP 55 protection.
- Electrical tools must have double insulation.

- Wherever possible, check the equipment or machine's isolation, as this will make it possible to work with the facilities free from power and in safe working conditions.
- All High Voltage jobs need a work permit.

For jobs in the vicinity of electrical facilities with voltage, always remember to respect the safety distance according to this table:

Effective voltage	Minimum distance in metres
0 to 24 volts	0
24 v to 1 kv	1
1 kv to 66 kv	3
Over 66 kv	5

PROHIBITIONS

- Do not use equipment or facilities that are in poor condition.
- Do not use electrical tools in wet areas.
- Do not wear any piece of jewellery that may be a conductor (metal).
- It is forbidden to handle equipment and machinery electronically or mechanically if they are not disconnected from their source.
- It is forbidden to interfere with electrical boards or panels if you are not qualified for electrical work.

ALWAYS RESPECT COMPLIANCE WITH THE GOLDEN RULES FOR ELECTRICAL JOBS

7.7 WORKING WITH HAZARDOUS SUBSTANCES

DEFINITION:

WORK WITH HAZARDOUS SUBSTANCES is any work in interaction with chemical substance that presents a safety risk, a risk to health and/or the environment, and could cause temporary or permanent damage.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Exposure to gases and/or vapours (asphyxiation/intoxication/burns)	<ul style="list-style-type: none"> • Deficient risk assessment • Deficient preventive control measures (e.g. lack of ventilation) 	<ul style="list-style-type: none"> • Incorrect use and/or choice of PPE • Lack of power drainage/blocking
Explosion	<ul style="list-style-type: none"> • Interaction of jobs hot works 	<ul style="list-style-type: none"> • Presence of gases in the atmosphere
Contact	<ul style="list-style-type: none"> • Incorrect use and/or choice of PPE • Incorrectly sealed PPE 	<ul style="list-style-type: none"> • Lack of power drainage/blocking

GENERAL REQUIREMENTS TO BE CONSIDERED

Some chemical products have characteristics that, when workers are exposed to them in an uncontrolled manner, may cause harsh or chronic effects and/or lead to illness.

For this reason, working with harmful substances requires knowledge of:

- ▶ The working method to use
- ▶ The substance or chemical to be used
- ▶ Type of exposure to the substance

The working method helps us to recognise the risks of exposure, to decide on PPE and which prevention and control measures to apply.

Recognising the hazardous substance and having information from the **Material Safety Data Sheet** will determine the protective measures and emergency measures to implement in case of an accident.

Below, you will see the general requirements that you must take into account when working with these products:

- It is always advisable to avoid exposure to chemical products (therefore, look for alternative working methods).
- If you will be exposed to a harmful substance you must have the corresponding training, according to the product that you will be handling (safety data sheet).
- The product or substance to be used must always be identified. Pay particular attention to the packaging after decanting and/or use.

Regarding the use of personal protective equipment (PPE):

- ▶ **Correct choice.** The material safety data sheet outlines the PPE that must be used.
- ▶ **Correct use.** Carry out a prior check on the PPE to ensure there is no physical damage where the substance or chemical product could penetrate. If necessary, use tape to seal the PPE in places where the chemical product may penetrate (e.g. suit and gloves).

- ▶ **Correct care.** Store PPE in isolated places that are specifically designated for this purpose. Do not unnecessarily expose them to compounds of the chemical substances used.

- Comprehend and respect the pictograms on the original packaging. These pictograms will help you to identify the risk (explosive, corrosive, toxic, or other).



- Remember that chemical products can get into our bodies by different routes, such as through the skin or respiratory system. The way in which the chemical product is presented (solid, liquid, powder, gases or vapours) can affect the damage that it may cause you.
- In case of an emergency situation (accident) it is important that you have the safety data sheet available to give to the attending medical service.

When storing these chemical products you must:

- ▶ Check the characteristics of its hazards for storage purposes.
- ▶ Check product labels.
- ▶ Keep the area closed and indicate the corresponding prohibitions using signs (e.g. no smoking).
- ▶ Have containing, extinguishing and control means nearby available.

PROHIBITIONS

- Do not use soft drink bottles or food containers to transport chemical products.
- Do not work with unidentified chemical products or those of unknown identity.
- Do not use products in handling, storage or application tasks without the corresponding PPE.

**BEFORE STARTING TO WORK, CHECK THE
INFORMATION ON THE MATERIAL SAFETY DATA
SHEET**

7.8 WORKING IN CONFINED SPACES

DEFINITION:

WORK IN CONFINED SPACES is considered to be any place with limited access for entry and exit; has poor natural ventilation that potentially leads to it containing or producing dangerous air pollutants, and it is not designed for continuous occupation by workers.



MAIN RISKS

RISK	POSSIBLE CAUSES	
Asphyxiation/ intoxication/ burns	<ul style="list-style-type: none"> • Low concentration of oxygen • Exposure to toxic gases 	<ul style="list-style-type: none"> • Exposure to corrosive or flammable substances
Explosion	<ul style="list-style-type: none"> • Explosive gases 	<ul style="list-style-type: none"> • Explosive atmosphere
Contact with energy	<ul style="list-style-type: none"> • Defective electrical equipment • Lack of blocks 	
Noise	<ul style="list-style-type: none"> • Exposure to equipment noise 	
Thermal shock	<ul style="list-style-type: none"> • Environmental conditions (thermal stress) 	

GENERAL REQUIREMENTS TO BE CONSIDERED

Working in a confined space can lead to a potential accident if you do not bear in mind compliance with certain requirements.

As general requirement and independently to the conditions that a confined space can present, it is important that you:

- ▶ Assess the condition of the confined space visually and using atmospheric measuring equipment.
- ▶ Define control measures.
- ▶ Define evacuation and/or emergency procedures.
- ▶ Monitor the work with a person acting as lookout.

Confined spaces can present different risk characteristics. To determine these conditions it will be necessary to measure atmospheric conditions with specific equipment.

Those conditions will determine the control measures to put in place.

The use of measuring equipment, specific respiratory protection or others may be required.

Below, we summarise the general requirements to comply with for such jobs:

- Ensure that you have specific training, in accordance with the work technique to be carried out.
- You must be fit and healthy to enter a confined space.
- Get the work permit that corresponds with the task.
- Establish the method of evacuation and/or rescue from within the space.

- Designate a lookout who will be posted outside the confined space (the lookout must fulfil this role alone and will be trained to act in case of evacuation).
- Have safe means of access or exit (e.g. ladders or similar).
- When working in ditches, drains and sewers, or similar, protect the hole with warning signs.
- Check the atmospheric conditions inside.
- Guarantee the isolation of energies (carry out the corresponding blocks to possible energies).
- If you require lighting, remember that it must be at a safe voltage (24 v).
- If your task is related to hot works, attempt to avoid inhaling gases and keep checking the conditions of the space.

PROHIBITIONS

- Do not enter without a work permit.
- Never enter a confined space alone.
- Never enter without first having checked the environmental conditions within the area.

**NEVER ENTER A CONFINED SPACE ALONE AND
WITHOUT HAVING ASSESSED ITS ENVIRONMENTAL
CONDITIONS**

7.9 HOT WORK

DEFINITION:

HOT WORKS are defined as being any temporary or routine job that involves flames, hot surfaces, sparks or molten materials that generate enough energy to potentially ignite combustible or flammable material.



MAIN RISKS

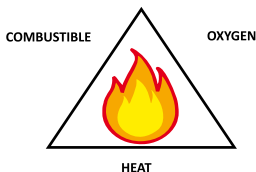
RISK	POSSIBLE CAUSES	
Fire	<ul style="list-style-type: none"> • Projection of sparks • Equipment short circuits 	<ul style="list-style-type: none"> • Lack of cleanliness/ tidiness and combustible or flammable material in the work area
Explosion	<ul style="list-style-type: none"> • Working on systems or equipment with explosive material • Poor use of oxy-cutting equipment and/or pressurised gas pipes 	<ul style="list-style-type: none"> • Presence of explosive gases or powder in the workplace • Working equipment (e.g. oxy-cutting) in poor condition
Material projection and/ or splashes	<ul style="list-style-type: none"> • Overlapping jobs • Non-use or incorrect use of PPE 	<ul style="list-style-type: none"> • Projection of sparks
Thermal contacts	<ul style="list-style-type: none"> • Overlapping jobs 	<ul style="list-style-type: none"> • Non-use or incorrect use of PPE

Any hot work generates a high potential risk. That will essentially depend on the environment where the work is being carried out and compliance with the control measures to be implemented.

Before defining the requirements for carrying out this kind of task, we are going to familiarise ourselves with the theory of fire.

A **fire** is an uncontrolled blaze. For combustion to occur, four factors need to coexist:

1. Oxygen.
2. Combustible or flammable material.
3. Heat.
4. Chain reaction free from disruption.



Combustion will **not** happen if one of these four factors is missing.

The general requirements may prevent incidents from happening, but if an incident occurs anyway, an initial immediate and successful extinction may prevent severe consequences.

GENERAL REQUIREMENTS TO BE CONSIDERED

- Before beginning a hot work, you should consider alternative working methods (e.g. use of carpet knives, shears, scissors or other).
- Always check that your hot work area is free from combustible or flammable material.
- If you are carrying out hot works you must be trained accordingly on the equipment to use and the work.
- Prior to starting the job you must get a work permit.
- Plan extinction methods, with at least two 8 Kg ABC extinguishers in the area.
- Avoid the projection of sparks by using screens.
- Ensure that the work area is correctly cleaned (eliminating all possible sources of fuel). If this is not possible, wet the area to avoid fire.
- Check that atmospheric conditions are appropriate for the work (free from combustible gases, explosives or others).

- Use the specific PPE for the task (e.g. welder's gloves, apron or jacket, welder's screen).
- Cutting and/or grinding jobs are considered hot work, and therefore you should consider the requirements in terms of controlling the projection of sparks areas at combustion risk.
- When you finish the work, check the possible ignition or contact of the fire with flammable parts.
- Ensure that the various work methods are executed with working equipment that is in safe conditions (see requirements for different work methods).

Requirements – cutting welding

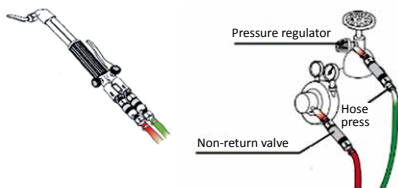
- Wear welding goggles to protect your eyes.
- Wear protective sleeves or gloves, a leather apron or protective clothing to avoid burns.
- The welder's assistants must also use PPE in accordance with the risks to which they are exposed (e.g. safety glasses, gloves).
- Avoid direct exposure to the welding fumes, or use forced extraction systems or respiratory protection.
- Do not wear work clothes that are dirty with fats, oils or other hydrocarbon.
- Check the correct isolation of the power cables and electrode holder.
- Soldering electrodes must never come into contact with water and/or the worker's skin.

Requirements – oxyacetylene welding or cutting

- With regard to the gas cylinders:
 - ▶ **Labelling:** Cylinders must be identified/labelled depending on their contents.



- ▶ **Storage:** Always in a vertical position and with valve protection cap in place.
- ▶ **Transportation:** This must be in vehicles specially designed for this purpose, supported with chains.
- ▶ **Lifting:** Vertically, with valve cap, and well supported in cages with chains for this purpose.



- ▶ The equipment must have a non-return valve.

PROHIBITIONS

- Welding cylinders must not be lifted by cranes, unless using special cages.
- Do not tip cylinders up to empty their contents.
- Do not use hoses of the same colour for different gases. In case of an emergency, having different colours will help manage the situation. In general: black or green for oxygen, and red for acetylene.

REMOVE ALL COMBUSTIBLE MATERIAL FROM YOUR HOT WORKING AREA BEFORE STARTING WORK

7.10 WORKING IN PROXIMITY TO WATER

Tasks near rivers, piers, vessels or alongside large liquid deposits (pools), must have preventive measures in place that minimise the risk of falling into the water.

These measures must be aligned with the demands requiring implementation of the following:

- The use of high visibility/reflective clothing and defined walking routes.
- The placement of barriers or protection that prevent workers from entering the risk area.
- Signage, in order to warn others about the risk.
- The use of life jackets and/or life rings.
- For works located close to the edges of piers, remember:
 - ▶ Keep a safe distance (2 metres) from the edges of the pier.
 - ▶ Check the condition of the mechanical protection that prevent falls.
 - ▶ The use of life jackets is mandatory.
 - ▶ Check that there is a life ring with retrieval line less than 15 metres from your position.
 - ▶ Work in pairs.



AVOID WORKING CLOSE TO THE EDGES TO PREVENT FALLING INTO THE WATER

7.11 LIFTING, MANUALLY TRANSPORTING LOADS

Manual transportation of loads generates risks that can lead to injuries if the correct techniques for executing the movement are not applied.

It is important that before carrying out this type of activity you think about:

- Can I move the load manually and do it using work equipment? (e.g. use of mechanical lifters, or similar).
- Can I lift or move the object? (the object must not exceed 25 kg).
- Is the route for the maneuver free from obstacles?
- Is it clear where the final position of the load is going to be?

If you did not think about these questions before starting the job, then you are likely to be at risk.

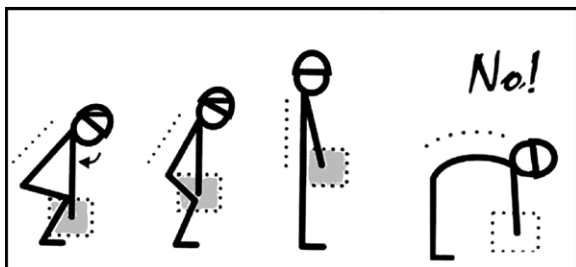
We recommend that you follow the instructions below in order to reduce the possibility of having an accident.

Considerations:

- Avoid lifting objects from floor level or above your shoulders.
- The maximum lift load for men is 25 kg and for women 20 kg.
- Make adjustments to storage areas to reduce the need of movements.
- Consider how you can minimise the transport distances.
- Assess the weight to be transported and, if necessary, divide the load into smaller and lighter parts.



- Avoid twisting and bending over.
- Apply the following lifting technique.
 - ▶ Separate your feet to provide a stable and balanced base for lifting, placing one foot ahead of the other in the direction of the movement.
 - ▶ For the lift, bend your legs and keep your back straight before starting to lift. Do not twist from your middle or adopt forced postures.
 - ▶ Take hold of the load with both hands, and bring it close to your body.
 - ▶ Gently lift the load using only the strength of your legs, keeping your back straight and your arms outstretched. Avoid pulling on the load and keep it tight to your body throughout the lift.



TAKE CARE OF YOUR SPINE, IT SHOULD LAST A LIFETIME

8 EMERGENCY PLAN

Managing emergencies is a part of Occupational Health and Safety Management. Every company working for UPM must develop a plan for potential emergencies regarding their specific tasks on the construction site. The company must also ensure that all its staff is aware of what to do in an emergency.

UPM will define the general guidelines for how to act in emergencies within the project and external works.

This plan will be adapted as the construction works progresses and changes will be communicated properly.

UPM will organise appropriate training regarding the plan for every contractor, and they will be responsible for following and ensuring that it is implemented and upheld.

What is an emergency?

An Emergency is a special situation that rapidly changes the normal course of activities.

Some of the most common are medical emergencies, fires, work-related accidents, traffic accidents, and others.





What is an evacuation?

This is the abandonment of an area or place where an emergency has been declared and that presents a risk to people's health.

It is important that when faced with instructions to abandon or evacuate an area, you do so in an orderly manner and accepting the guidance of staff leading the situation.

How to behave in an emergency situation?

Below, we provide you with a practical guide (PAA method) to act safely and efficiently when facing an emergency situation.

HOW TO ACT IN CASE OF EMERGENCY 		
<p>Protect</p> <p>Do not expose yourself to risks</p> <p>Assure the place</p> <p>Protect the injured</p>	<p>Warn</p> <p>Call the indicated phone number</p> <ul style="list-style-type: none"> - Name - Place - Magnitude of the emergency - How to get to the place 	<p>Help</p> <p>Provide first aid if you are trained to do so</p> <p>Act consequently</p>
<p>IN CASE OF EVACUATION</p> <p>Go to the nearest meeting point</p> <p>Follow the instructions indicated to you</p> <p>Keep calm, avoid running</p> <p>Do not return to the emergency place</p>		 <p>466 20 100</p> <p>Int. 101/102</p>

- PROTECT:** first we must make sure that both the injured person and ourselves are out of danger. For example, in a toxic environment, we would not start attending to the intoxicated person without first protecting our airways (using masks with the appropriate filters), because by not doing so we could also become victims of an accident.
 If someone has been electrocuted, do not touch them, but cut the electricity supply.

- **ADVISE:** you must advise the emergency services about the situation to activate them, and immediately start providing assistance (remember to provide the necessary information when you make the call).
- **ASSIST:** Once you have protected and advised, you should proceed to act on the person who has had the accident, recognising their vital signs:
 - ▶ 1. Consciousness
 - ▶ 2. Breathing
 - ▶ 3. Pulse (always in this order). Look for somebody who has done a first aid course.

It is everyone's responsibility to:

- ▶ Know their company's emergency plan.
- ▶ Know about communication systems and the emergency telephone numbers.
- ▶ Faced with an emergency situation, act and apply the PAA method.
- ▶ Know the meeting points for their work area and escape routes in case of an evacuation.

8.1 USING PORTABLE EXTINGUISHERS

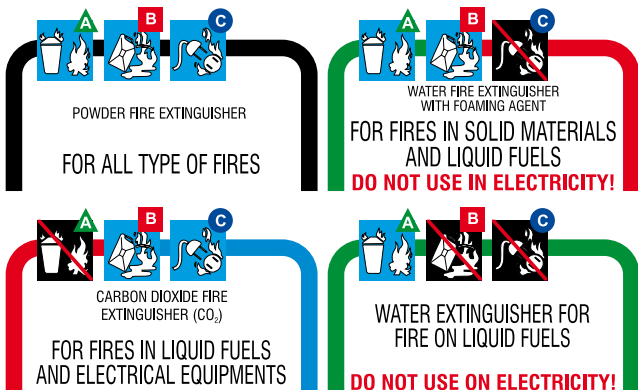
Portable extinguishers are pieces of equipment that contain an extinguishing agent that can put out or manage a fire when sprayed onto it.

It is a very efficient tool when it is used in the early stages of a fire, because its capacity is limited (approximately 16 to 20 seconds of projection in total).

It is important for you to know that as well as there are different sizes of extinguishers, there are extinguishers with different extinguishing agents:

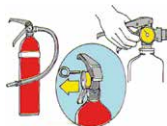
- ▶ **ABC powder extinguishers**, for all types of fire.
- ▶ **CO₂ extinguishers**, for liquid fuel fires and electrical fires.

To identify the extinguishers, look at the symbols and colours shown in the following labels:



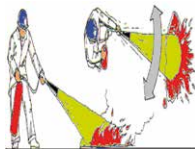
If using an extinguisher:

1. Remove the safety pin.
2. Lift the extinguisher to waist height.
3. Always stand with the wind behind you.
4. Direct the contents, always aiming the trigger/lever at the base of the fire.



Remember:

- ▶ Before moving with the extinguisher to the extinguishing area, check its contents.
- ▶ If it is possible to attack the fire with two or more extinguishers, apply them at the same time, working together to form sweep zones with angles that are limited by the wind direction.



9 REPORTS ON ONE SAFETY

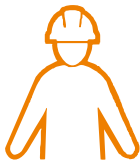


ONE SAFETY is our recording platform where you can record any kind of observation or incident anonymously.

We invite you to take part.



Have you just seen something potentially unsafe?



Stop and check what is happening. Tell someone about it.

Inform the person in charge.
Contribute to bringing out a solution.
Do not expect anyone else to do it.



Enter

onesafetyanonymous.upm.com or scan the QR code on your mobile phone

