

Occupational Health and Safety Guide

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Purpose of the NMB Work Safety Program

Why should we endeavor to prevent accidents at work?

The success of security management depends on everyone's collective effort to achieve a common goal. Based on these standards, to NMB, work safety as a value. This manual will contribute to its employees, exhibitors, assemblers and visitors, with the intent of achieving the common good, health and safety of everyone involved, which is a part of our mission, values and successful outcome of your events.

To achieve this, NMB will implement measures involving its operational team, in compliance with the Regulatory Standards, instructing everyone, by means of this safety guide, regarding the correct actions and procedures in the assembly and disassembly of its events.

Purpose of the NMB Work Safety Program

Experience shows that a good work environment, with controlled occupational risks contributes towards the increase of productivity, enabling and promoting and facilitating production planning, improving the internal communication and work relations, increasing confidence and self-esteem, with the commitment and the cooperation of everyone.

This guide is based on:

- Reduction, prevention and control of the occupational hazards;
- Occupational health prevention;

In short, everyone can only reap the benefits from health management and safety at work, the workers, the company and the country.

Actions for Events from 2021 ahead

In the events from 2021 ahead and in the coming years, we will continue to stress more emphasis on the management of occupational safety, with the hiring of occupational safety technicians, who will work during the assembly and disassembly period of the event facilities, accomplishing the following activities:

- Guidance, awareness and inspection regarding the compliance with OSH procedures, the correct use of PPE and the application of good work practices;
- Inspection to release the access of authorized individuals to the assembly site, using PPE, appropriate clothing and in full working conditions;
- If applicable, interrupt all work and activities that purports a risk to the health and physical integrity of workers, until they comply with safety standards and offer safety in their activities.

Actions for Events from 2021 ahead

- Work inspection in accordance with safety standards (NRs), stressing emphasis on these activities that purports the highest risk and with the potential of causing work accidents in event assembly, in special: Work at Height (falls) and Work with Electric Energy (electric shock).
- Requirements regarding the Preliminary Risk Analysis (APR) and the respective OSH operating procedure for all stands, leading our work safety teams to pay more attention to booths that may purport higher risk situations.
- Notification of cases of non-compliance with the rules and fines if these events have new occurrences.

Actions for Events from 2021 ahead

RESPONSIBILITIES:

It is the Contractor's responsibility to plan and execute its activities in order to prevent work incidents, preserve the health of its employees and the environment.

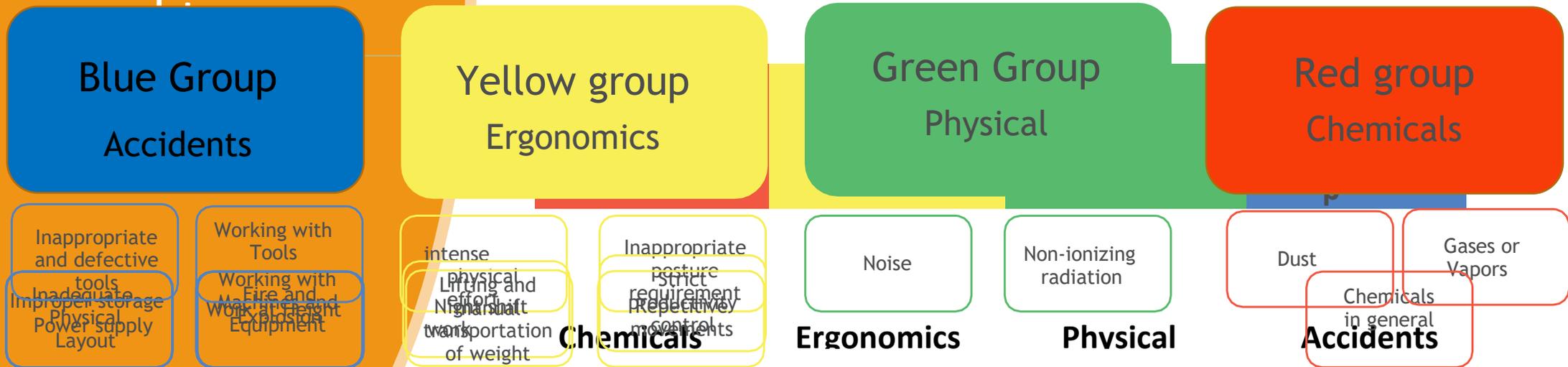
Responsibility also means the obligation to interrupt any activity or viewpoint that represents an immediate risk to your Health and Safety.

The contractor must appoint a person in charge, with specific experience to comply with the obligations of Health and Safety at work.

Risk classifications

During the assembly and disassembly process, we classify our activities in accordance with their probability of occurrence and the severity, in other words, the identification of the hazards, dangers and the criticality of the risk experienced by the workers during the accomplishments.

First, we divide the **Hazards and risks** according to their nature:





Standards and good practices in the assembly

Provide PPEs that are suitable to endure the risk, in accordance with each activity to be performed and the associated risks: safety goggles, hearing protection, gloves, helmets, clothing, seat belt, shoes, etc.

All PPEs must be in good working condition and within the manufacturer's warranty period.

Choose the right tools: don't improvise using tools for purposes other than those for which they were designed;

Prioritize the design quality of electrical installations: The electrical and occupational safety engineers in charge of the projects must comply with the requirements of the Regulatory Standards No. 10 and the current Technical Standards, they must also indicate conditions that will be carried out and the facilities that will be used, proper grounding, cable projection and installation of electrical panels insurance;

Standards and good practices in the assembly

Investment in Training: Meet the requirements of OSH training courses as established in the relevant Regulatory Standards.

Regardless of the NMB's internal Rules and Procedures, the Contracted Company is required to comply with all legal requirements applicable to its field of activity and under no circumstances may it claim not to be aware of them.

Standards
and good
practices in
the
assembly
process:
*Power
supply*

Regulatory Standard 10 **safety in electrical installations and services** *"establishes the minimum requirements and conditions for the implementation of control measures and preventive systems, in order to ensure the safety and health of workers who, directly or indirectly, interact in electrical installations and electricity services"*.

All locations with electrical interventions or installations must implement preventive risks control measures to ensure their safety. These preventive measures must be used together with other local initiatives within the scope of the preservation of safety and health.

Standards and good practices in the assembly process: *Power*

In addition to the requirements of NR.10, the ABNT technical standards must also be met, in particular the ABNT NBR 5410 Standard.

NR 10 establishes, for example, control measures for electrical work. There are three main risk control measures in electrical installations:

- **Collective protection measures** (de-energization, isolation of energized parts, obstacles, barriers, signage, automatic power supply disconnection system, automatic reclosure blocking;
- **Individual Protection Measures;**
- **Work Procedures**

The use of extra low voltage to protect people against electric shock is dealt with in NBR-5410.

The use of personal adornments is forbidden when working with electrical installations or in their vicinity.

Standards and

GROUNDING

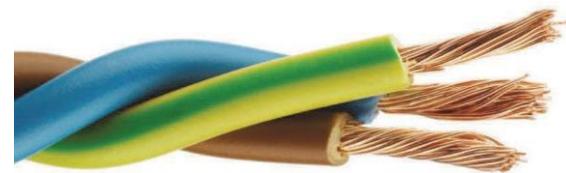
good practices in the assembly process: Power supply

Electrical grounding is an effective, reliable and suitable electrical grounding connection deemed as the conductive mass with electrical power sources which is equivalent to zero.

In some work situations, the use of temporary electrical grounding is mandatory, which consists of an effective reliable and intentional adequate electrical grounding connection, designed to ensure equipotentiality and is maintained continuously during the intervention in the electrical installation.

Electrical grounding has very important functions, including: an “alternative” path to grounding, and also to enable the discharge of static charges accumulated in the frames of machines or equipment, to the grounding system by means of the “grounding rod”.

It is not allowed to cut or remove the grounding wire that is comprised



Standards and good practices in the assembly process: Power supply

Sockets and Plugs

Electric machines, equipment and tools must be connected to the power supply network, by means of a plug and socket, in accordance with current national technical standards.



Sockets with (4 mm) diameter must be used, for devices with a rated current of up to 10 amps, and (4.8 mm) plugs for equipment that operate with more than 10 Ampere in up to 20 amps. This difference was necessary to ensure safety, since it prevents the connection of higher power equipment at a point that was not specifically designed for this action.

In installations, three-pin plugs must be used, since the third pin makes the connection with the ground wire, preventing someone from suffering an electric shock when connecting to short-circuited appliances.

Standards and good practices in the assembly process:

Power

supply



Distribution switchboards

The distribution boards of electrical installations must:

- a) be scaled with the capacity to install the components of the electrical circuits that are comprised in it;
- b) be made of materials resistant to the heat generated by the components of the installations;
- c) have the energized parts inaccessible and protected to unauthorized workers;
- d) have unobstructed access;
- e) be installed with sufficient space to carry out services and operation;
- f) be identified and signaled in terms of the electrical risk;
- g) comply with the required protection class (IP degree);
- h) have circuits identification.



Standards and good practices in the assembly process:

Power

supply

Distribution switchboards



The electrical circuit commands must:

- a) be compatible with the electrical circuits that are used;
- b) be identified;
- c) equipped with conditions for the installation of the blocking and signage devices in order to prevent the connection.

Autonomous isolating devices which can be activated easily and safely must be installed on the branches or circuits intended for the connection of electrical equipment.



Distribution boards may be inspected by the NMB team or an inspection agency. They must be in an accessible place and the electrical risk must be indicated on it.

Standards and
good practices
in the assembly
process: *Work
at*

The guidelines for working safely at heights are in NR 35 – Work at Heights and NR 18 – Occupational Health and Safety Conditions in the Construction Industry.

The objective is to establish the minimum protection requirements for work at height, involving planning, organization and execution. In other words, it guarantees the safety and health of workers directly or indirectly involved in work at heights.

Work at height is considered to be any activity performed above 2.00 m (two meters) from the lower level, where there is a risk of falling.

Standards and good practices in the assembly process: Work

at

Height

Standards

Scaffolding

The assembly of scaffolding must be carried out according to the project prepared by a legally qualified professional and by workers trained in the safe assembly of scaffolding.

For scaffolds that are simply supported, built on a single tower with a height less than 4 (four) times the smallest measurement of the support base, the assembly project is not required and, in this case, it must be assembled in accordance with the manufacturer's instruction manual.

All elements must be fitted perfectly in the correct position and their parts should be pinned or screwed to avoid any accidental disengagement during their use

Isolate the surroundings of the assembly, disassembly and work area and the tools used must be tethered in order to prevent their fall.



and good

practices in the assembly process: Work at Height

Scaffolding

Scaffolds must be mounted on level and flat floors and free from interference (cables, depressions, unevenness, etc.). If it is impossible to achieve adequate levels, accessories should be used in order to achieve stability.



Caster scaffolding should only be used on a **flat horizontal** surface for the safe movement

All workers must use the appropriate EPIS for the work of assembling scaffolding and work at heights, with a valid CA number and in perfect usage condition.



Standards and good practices in the assembly process: Work

at

Height

Scaffolding must:

Have a formal record of usage permit signed by an occupational safety technician or the person responsible for the work front or construction site.



Have access system to scaffolding and workstations, safely accomplished by stairs and guardrail with baseboard.

Have a resistant work surface, with complete lining, non-slip, leveled and have a lock that does not enable its displacement or disengagement. If the lining is with wooden planks, they cannot be painted to avoid knots or cracks.

Standards and good practices in the assembly process: Work

at

Height

Scaffolding



Do not leave hand tools on work or circulation surfaces and on scaffolding.

Any damaged part of the scaffolding will have its usage revoked until complete re-evaluation. Any part of the scaffold that is considered to be damaged and beyond repair must be scrapped.

All material used in the assembly of scaffolding must be kept organized in order to prevent its fall and allow safe circulation in the area and must be stored in appropriate places, when not in use.

The contractor may foresee the use of motorized Mobile Lifting Platforms, to avoid the continuous assembly/disassembly of scaffolding.

Standards and good practices in the assembly process: Work

at

Height

Ladders

(Double easel-type, opened or self-supporting)



Before using the ladder, always check the condition of the equipment in order to assess its stability, cracks, hardware, screws, damaged parts and the safety of all steps. If the ladder is not in good condition, it should not be used.

Ladders should have a maximum height of six meters. It is recommended that, when in the open position, the distance between the lower ends of the two parts is approximately $2/3$ of the extension. The minimum distance between the posts at the top of the stairs must be of 30 centimeters

Standards and good practices in the assembly process: Work

at

Height

Ladders

(Double easel-type, opened or self-supporting)



The support base and fixation of the ladder must be solid and stable in order to avoid slipping, never use another structure to increase the height of the ladder. Instead, always plan your service in advance when you are supposed to use an appropriately sized ladder. Do not move around while you are using the ladders.

Ladders must have steel rods or course stops arranged at intermediate points throughout their length. When open, the tie rods must remain in the maximum open position. This locks the ladder, consequently preventing sudden movements. It is not allowed to use ropes, wires or wires as course limiters.

Standards and good practices in the assembly process: Work

at

Height

MOBILE WORK PLATFORMS (PEMT)

The requirements of the current national technical standard - **ABNT NBR 16776 and NR.18 must be met.**

Platforms must only be operated by qualified people and for the PEMT model to be used, or a similar one, at the workplace.

The platform must have an emergency button on the control panel with easy access if necessary.

Workers using platforms must receive guidance on the correct loading and positioning of materials on the platform.



Standards and good practices in the assembly process: Work

at

Height

MOBILE WORK PLATFORMS (PEMT)

Operator and other workers must wear a parachutist type safety belt connected to the available fixing point and indicated in the platform cabin.



PEMT must have an automatic audible signage system activated when it goes up and down.

Before use or at the beginning of each shift, a visual inspection and functional test must be carried out on the PEMT, verifying the perfect fit and functioning of the following items according to the **equipment manual**:

- Emergency operation controls;
- Safety devices of the equipment;

Standards and good practices in the assembly process: Work

at

Height

MOBILE WORK PLATFORMS (PEMT)

Before and during PEMT movement, the operator must maintain:

- A clear view of the direction to be taken;
- safe distance from obstacles, dips, ramps and other risk factors;
- min. distance of aerial obstacles (Beams, Crossbars, etc.).



The place where the platform is used must be signposted to avoid the circulation of unauthorized persons.

Standards and good practices in the assembly process: Work

at

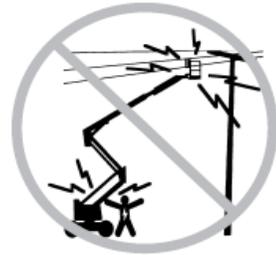
Height

MOBILE WORK PLATFORMS (PEMT)

The following operations are prohibited:



Do not leave the platform and do not use PEMT for cargo transport



Keep a safe distance from electrical installations and use level and resistant floors

Standards and good practices in the assembly process: Work

at

Height

STANDS



The worker must wear a safety belt of the parachutist type in activities above 2.00 meters in height in structures connected to the stand and with a risk of falling.

The belt must be connected to a fixation system such as a lifeline, to the scaffolding structure itself or to a fixed and secure structure of the stand if a fixation device is not available.

Every employee who works at height must have a valid training course with a minimum workload equivalent to 8 hours.

Fit the seat belt comfortably, it should be neither tight nor loose

Standards and good practices in the assembly process: Work at

Height

STANDS

The following PPEs must be used:



The carabiner must have an opening large enough to be fixated to the scaffolding pieces

Your safety equipment must be inspected before the beginning of the activity.

If any defect is attested, it should not be used and this must be reported to your supervisor.

Standards and good practices in the assembly process:

Equipment

COMPRESSORS



Compressors must be in good condition to be used with no changes that may compromise safety, such as the adjustment of the safety valve, and the documentation must be available on site.

These must be operated by trained personnel who must always read their instruction manual;

Never exceed the maximum pressure indicated on the equipment and only authorized personnel can carry out maintenance;

Choose an appropriate location for the installation;

Turn off the engine when the machine is not in use or to make any repairs. And when you notice any problem, stop using it and report it to the person in charge.

Standards and good practices in the assembly process:

Equipment

COMPRESSORS



Before starting to use the compressor, make sure that valves, hose , connections and clamps are secure and that they will slacken during the use. If a hose disconnects under strong pressure, it can whiplash and hit someone causing serious injury. If this happens, move away from the equipment, protect yourself and try to cut off the air supply or **compressor** power.

Always inspect the **air compressor** check valve, it is the most important part of the equipment, since it allows the compressed air to be stored inside the structure, problems with this part, in addition to harming the work, can pose risks.

Standards and

good practices in

the assembly process: Equipment

TOOLS

Power tools such as drills, screwdrivers, etc., must be in good working order, their parts must not be changed, and these tools may only be used by personnel trained in their safe use.



They can only be used for their purpose, in accordance with the manufacturer's manual, and their use for other functions is prohibited.

Only use compatible components and parts as specified by the manufacturer.

Mobile machinery, equipment and portable power tools must be connected to the power supply network, by means of a plug and socket set, in accordance with current national technical standards.

Standards and good practices in the assembly process:

Equipment

TABLE SAWS



Saws must be operated by trained workers, hands must be kept out of the cutting line, pusher devices and alignment guide must be used.

It is forbidden to remove the protective hood or any other safety devices.

When replacing the cutting disc, cleaning or maintaining it, the disc must be disconnected from the electrical mains and the blocking requirements of NR.10 must be complied with.

In its use, the use of goggles, face shield, apron, and ear protectors are mandatory,

Saws must be installed in a well-lit and safe place for other workers and inspected in accordance with their manual.

Standards and good practices in the assembly process:

Equipment

WELDS

The dangers to which welders are exposed are:



- Inhalation of metallic fumes
- Uncomfortable position and heavy items lifting
- Eye damage and skin damage due to UV and IR radiation from the welding arc.
- Spark Projection
- Noise exposure
- Contact with electrically conductive equipment and exposure to electric shock
- Fire or explosion

Standards and good practices in the assembly process: Equipment

WELDS



Any work using welding will be evaluated and authorized only by the NMB's work safety team. The integrity of the equipment will be inspected conjointly with their safety items, such as the qualification of employees and the use of appropriate PPE.

An appropriate area with ventilation will be designated for the work with welding and it will be supported by a brigade and with isolation of the facility.

Protection against fire, splashes, heat, sparks or sludge must be achieved, in order to avoid contact with combustible or flammable materials, in order to avoid interference with parallel activities or the movement of people

Standards and good practices in the assembly process: Equipment

WELDS

In hot work using gases, the following measures must be taken:

- a) use only gases suitable for the application, according to the manufacturer's information;
- b) Comply with the determinations indicated in the Chemical Product Safety Data Sheet - MSDS;
- c) use pressure regulators and pressure gauges calibrated and in accordance with the gas used;
- d) use only appropriate ignitors, which only produce sparks and do not have a fuel tank, to light the torch flame;
- e) prevent contact of high-pressure oxygen with organic materials such as oils and greases



Work environment organization *Signage*

Signage is a set of stimuli that provide the best guidance for professionals, who will know how to act in certain marked places and circumstances.

During the assembly period, all work that poses a risk to other people on site must be properly signaled and isolated, avoiding exposure to danger.

The following must be signaled:

- Warning or Danger Signage;
- Emergency signage;
- Obligation signage.

Standards and good practices in the assembly process:

Signage

WARNING OR DANGER SIGNAGE

These items are used to inform the employees of situations and locations that require full attention and precaution and/or to inform that there is some danger in that specific environment, in order to avoid work accidents.

Any work that requires isolation or restriction of access must use this type of signage.



ood



e a



ess



EMERGENCY SIGNAGE



This type of signage is supposed to indicate emergency exits, escape routes or the location of safety equipment that should be used in the case of emergency conditions (fire, flooding, gas leak, among others), enabling the escape of workers and visitors.

The pavilion has emergency signaling, but as deemed as necessary by the NMB work safety team, emergency signage can be required at the stand or workplace.

Standards and good practices in the assembly process: Signage



**ATENÇÃO PARA
O USO DE EPI'S**

*Equipamento de Proteção Individual



OBLIGATION SIGNAGE

Its main objective is to indicate situations or actions that requires workers to comply with safety procedures and use Personal Protective Equipment (PPE) that are suitable for the risk in order to avoid possible accidents at work and mitigate their consequences.

MESS ROOM

The event organization provides a place for meals outside the assembly environment. This location should have full signage, during mealtime employees will be led by the NMB team to this place.

DRINKING FOUNTAIN

The pavilion has drinking fountains in marked locations.

INDIVIDUAL USAGE MATERIAL

All material for meals and drinks such as glasses and cutlery must be for individual and disposable use. Material for collective usage for meals purpose, even if washable, is not allowed.

Work
environment
organization
*Personal
Protective
Equipment*

Personal protective equipment (PPE's) neutralizes the effects of exposure to risk factors, prevents the appearance of occupational diseases and plays an essential role in ensuring your safety

Its use is determined by Regulatory Standard 6 (NR 6), which considers PPE as “every device or product, for individual use used by the worker, intended to protect against risks that may threaten safety and health at work”.

All PPE must contain a valid CA number and be in full working order.

Work
environment
organization
*Personal
Protective
Equipment*

OBLIGATIONS OF THE EMPLOYER

- Acquire and provide PPE that are suitable to the risk of each activity.
- Require correct use of PPE.
- Provide the worker only with the PPE approved by the national association responsible for occupational safety and health
- Guide and train the worker on the proper use, storage and keeping of the PPE.
- Replace the PPE immediately when it is damaged or lost
- Be responsible for the cleaning and periodic maintenance of the PPE.
- Inform the pertinent entity regarding any irregularities observed with the PPE used.
- Register the provision of PPE to the worker, in books, forms or the electronic system.

Work
environment
organization
*Personal
Protective
Equipment*

OBLIGATIONS OF THE EMPLOYEE

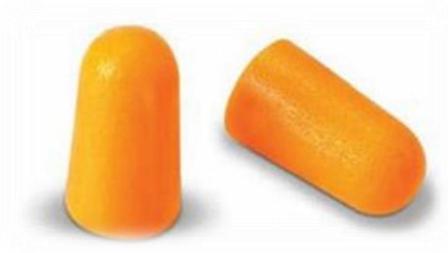
- Use the PPE only for the purpose intended;
- Be responsible for the safekeeping and conservation of PPE;
- Inform the employer regarding any change that makes the PPE unsuitable for use
- Comply with the employer's requirements for the proper use.

Standards and good practices in the assembly process: PPE

Stands construction



HARD HAT



EAR PROTECTION



FACE MASK



PROTECTION BOOTS



GLOVES



SAFETY GOGGLES

Standards and good practices in the assembly process: PPE

Electricity Works



RUBBER INSULATING GLOVE

+

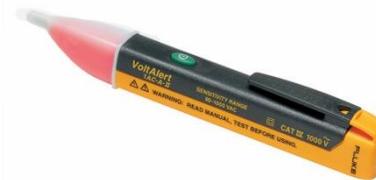
LUVA DE COBERTURA



CLAMP METER



VOLTAGE DETECTOR



FIRE
RETARDANT
CLOTHING

Standards and good practices in the assembly process: PPE

Work

at Height



SAFETY HARNESS
WITH



SHOULDER BELT



HELMET AND
MOUTH PIECE



GLOVES

Risk Matrix Form

We have prepared a preliminary study with the activities that are conducted in the construction of booths, outlining the stages of carrying out the activities or a process, to identify any risks involved in the work and the most appropriate measures that should be taken to prevent accidents.

The Risk Matrix has a preventive purpose, it must be carried out in the stand assembly planning, especially in activities in which the regulatory standards establish its obligation.

The purpose of the Risk Matrix is to identify the existing risks in the work environment and, based on that, establish what actions must be taken to correct any failures and guarantee the safety and health of the worker during the assembly performance.

PROBABILITY CHART	
OCCURRENCE PROBABILITY	DESCRIPTION
1- Unlikely	There are no records of occurrences or occurrence trends
2 - Not very likely	The expected way of carrying out the activity minimizes the dangers and is systematically practiced; There are records/reports of occurrence at least once in the last year
3 - Very Likely	The expected way of carrying out the activity does not minimize the dangers or is not systematically practiced; There are records/occurrence report of more than once in the last year

SEVERITY CHART	
SEVERITY OF INJURY OR DISEASE	DESCRIPTION
1- Light	Superficial injuries and/or diseases with temporary discomfort, which are reversible according to the worker's health and physical integrity. Injury or illness without loss of time - First Aid
2 - Moderate	Moderate injuries and acquired diseases due to continuous exposure to external agents and repetitive work, being considered reversible in terms of the health and physical integrity of the worker. Time-wasting injury characterized by temporary total or partial disability.
3 - Serious	Serious and severe injuries, acute/critical illnesses characterized by disability and/or permanent partial or total incapacity, considered irreversible to the health and physical integrity of the worker. Fatal injuries.

CLASSIFICATION CHART	
RISK LEVEL	CLASSIFICATION
1	Trivial/Acceptable Risk
2	Low Risk
3-4	Moderate Risk
6	Substantial Risk
9	Intolerable/Unacceptable Risk

RISK MATRIX - CLASSIFICATION			
OCCURRENCE PROBABILITY	SEVERITY OF INJURY OR DISEASE		
	1- Light	2 - Moderate	3 - Serious
1- Unlikely	Acceptable/Tolerable	Low	Moderate
2 - Not very likely	Low	Moderate	Substantial
3 - Very Likely	Moderate	Substantial	Not Acceptable/Intolerable

How to fill in Risk Matrix

The process presented in the base table must be analyzed and the fields must be filled in: Probability, Severity according to instructions available in each table.

After filling it out, crossing the Probability x Severity data and then we have the Classification data that must also be filled out.

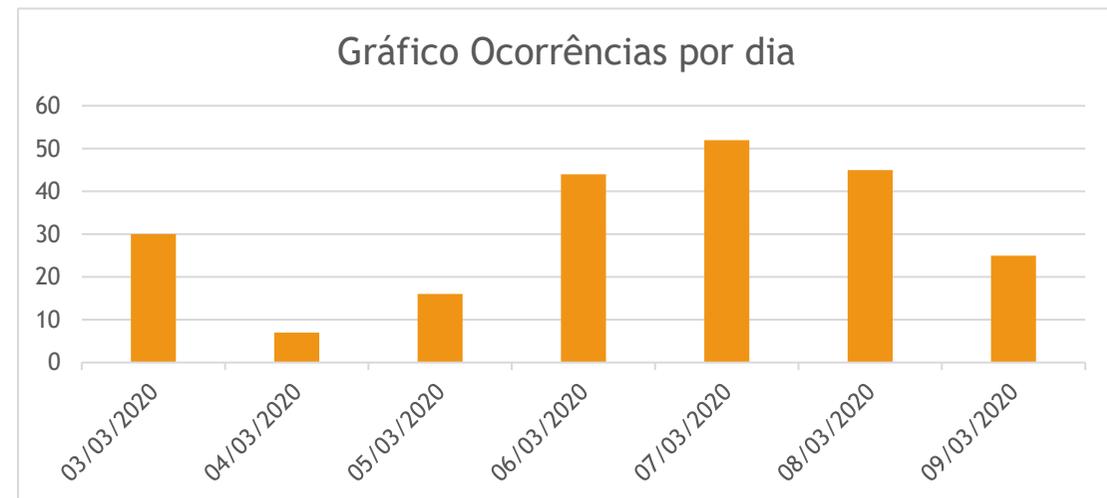
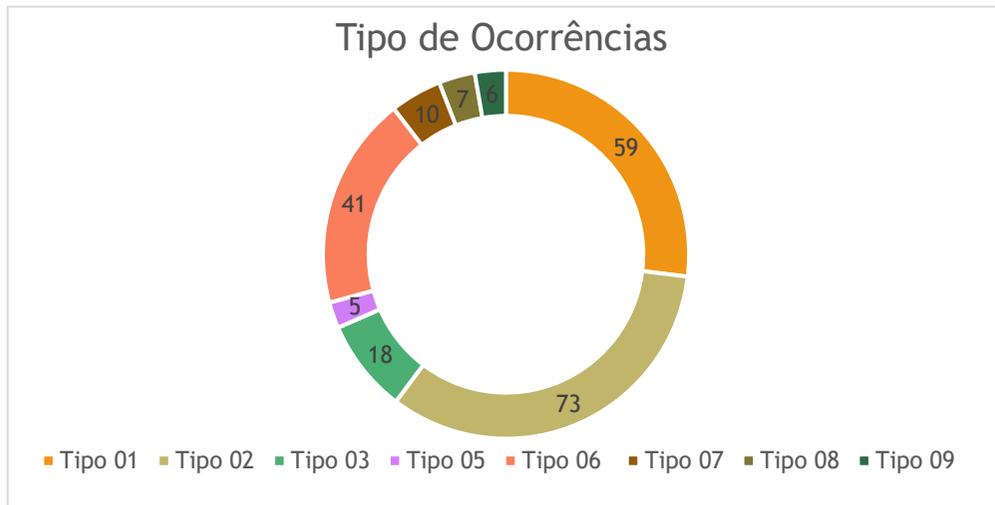
Finally, fill in with a preventive measure that will be adopted to mitigate the risk.

RISK MATRIX FEIRA REVESTIR 2021							
Risk Group	Hazard	Consequence	Processes / Causes	Probability	Severity	Classification	Prevention Measures
RED GROUP	Risks of Accidents	Inadequate Physical Layout	Poorly organized environment with stacking of materials that can pose a risk of accidents or obstruction of passage	1	2	Low	The material should be sent according to usage schedule and should be stacked in an orderly manner

Inspection: NMB Team and Notification

Gabarito de Ocorrências		
Tipo	Legenda	Quantidade
Tipo 01	Não uso de capacete	59
Tipo 02	Não de demais EPIS quando necessário (máscara, óculos, luvas)	73
Tipo 03	Não uso de cinto de segurança trabalho de altura	18
Tipo 04	Inconformidade de instalações elétricas	0
Tipo 05	Uso inadequado de plataforma ou plataforma fora das normas	5
Tipo 06	Uso inadequado de escada ou escada fora das normas	41
Tipo 07	Uso inadequado de andaime ou andaime fora das normas	10
Tipo 08	Atividade Perigosa	7
Tipo 09	Compressor inadequado ou sem documentação	6

Notificações por Dia	
Data	Número
03/03/2020	30
04/03/2020	7
05/03/2020	16
06/03/2020	44
07/03/2020	52
08/03/2020	45
09/03/2020	25
Total	219



Inspection: NMB Team and Notification

