



**Miami East Local School
District
2020-2021**

Shop Safety Plan

(Revised 7/1/2020)

General

This policy applies to **Miami East Local School District** work areas that use machinery for wood-working, metal grinding, drilling etc. NC-OSHA contains a number of safety standards that are directed toward the safety of employees who operate these type machines.

Point of Operation Guard

NC-OSHA requires that points of operation such as saw blades, grinding wheels, drive belts etc. be enclosed with a guard or shielded, to protect against operator contact. Generally these protective features are provided with the machine and should not be removed.

First Aid Kits

It is recommended that all shop areas should be supplied with first aid kits.

Eye Protection

Cutting, grinding and drilling operations present a hazard of flying chips and pieces. Eye protection such as goggles or safety glasses are always required when using these machines. Signs should be posted "Eye Protection Required When Using This Machine."

Electrical

All shop machinery must be properly grounded and the electrical disconnect or circuit breaker identified. Also the electrical connection must be arranged so that activated machines do not automatically restart after power failures.

Dust Control

NC-OSHA currently does not classify wood dust as a toxic dust. However, excessive accumulation of dust in the air and on surfaces is a serious fire hazard. The toxicity of metal dust depends on the type of material being used in the machine. As a general rule the need for special ventilation depends on the size of the shop and the frequency of use. All shops should have a portable shop vac and be cleaned frequently.

Finish Coatings, Adhesives and Oil Base Paints

Each shop area is encouraged to minimize the stored quantity of flammables such as finishes, glues and oil base paints. In no case shall the total amount on hand exceed 10 gallons. Most flammable liquids can also present a health hazard due to inhalation of fumes if the work area is not properly ventilated.

Toxic Effect of Chemicals

All chemicals have toxic effects at some dose level for some route of exposure. It is therefore wise to minimize exposure to chemicals. Chemicals can have local or systemic effects. Local toxicity refers to the direct action of chemicals at the point of contact. Systemic toxicity occurs when the chemical agent is absorbed into the bloodstream and distributed through the body, affecting one or more

organs. Toxic effects are also classified as acute or chronic. Acute effects are observed shortly after exposure. Chronic effects result from long term exposure or appear after a latency period.

Routes of Exposure

Dermal contact, one of the most frequent exposures to chemicals, is by contact with the skin. Spills and splash can result in over contamination of the skin. A common result of skin contact is localized irritation or burns. Some materials are also absorbed through the skin to produce systemic poisoning. Skin contact hazards are often associated with caustic or acidic cleaners which are highly corrosive upon contact or with petroleum base products which are irritating on repeated contact.

Inhalation of toxic vapors, mists, gases, or dust can produce poisoning by absorption through the mucous membrane of the mouth, throat and lungs and can seriously damage these tissues by local action. Inhaled gases or vapors may pass rapidly into the capillaries of the lungs and be carried into the circulatory system. The degree of injury resulting from inhalation of toxic substances depends on the toxicity of the material, its solubility in tissue fluids, its concentration, and the duration of exposure. Inhalation hazards are most often associated with gases and volatile products such as adhesives, wood finishes or paint thinners. Dust and non-volatile liquids can also present an inhalation hazard. Materials in the form of dust and particulates can become airborne when transferred from one container to another, or by grinding and crushing. Splash created from spills and during vigorous shaking and mixing also result in aerosol formation. Many of the particulates generated during such procedures do not settle out but remain suspended in the air currents in the room. For many operations it is not obvious that an aerosol is being generated, and personnel may not be aware that a hazardous situation exists.

Ingestion of toxic materials can also occur when contaminated hands come in contact with the mouth or with food items that are placed in the mouth. Food items and utensils themselves can become contaminated when stored near chemicals.

The eyes are of particular concern because they are so sensitive to irritants. Ocular exposure can occur via splash or when contaminated hands rub the eyes. Few substances are innocuous in contact with the eyes, and a considerable number are capable of causing burns and loss of vision. The eyes are very vascular and provide for rapid absorption of many chemicals.

Safe Handling Practices

Read the container of the material you are working with. Do not use a material if you are not sure what it is.

Review the MSDS, available from your supervisor, if you are not sure of the

chemical hazards after reading the label.

Use protective gloves, goggles, etc. as instructed on the label. If you do not have these items contact the Director of Safety and Security.

Determine ventilation needs, or if respiratory protection may be required. In general this will depend on the following:

- Evaporation rate of the product. Flammables of high evaporation rates
- Corrosiveness of the fumes (ammonia, bleach), or the toxicity of fumes
- Length of potential exposure
- Size of open surface area created and method of application. A large surface area would be created by application of a thick coat such as in wood finishing or cleaning. Spray application is more hazardous than brush application.
- Temperature of the product. Heat increases evaporation.
- Note location of the nearest eye wash, shower, or other water source. Plan how you would quickly flush your eyes or skin if an accident should occur.
- Wash your hands when finished using chemicals to prevent ingestion. Also rinse your gloves and clean your eye goggles.
- Store chemical products at eye level or below
Reseal all containers after use
- If a spill occurs, contain the material if safe to do so. Evacuate people from the area and contact the administration.

Employee Responsibilities

Each staff member is responsible for insuring that safe working conditions are provided for employees under their supervision and for investigating reports of unsafe working conditions. Each supervisor is responsible for knowing the safety and health guidelines, investigating accidents, reporting accidents and properly advising the administration and the Safety Management Committee of appropriate situations. Faculty members and department chairs have the same responsibilities with respect to the students they instruct or supervise in clinical, shop, and laboratory settings. Similarly, supervisors and faculty must assist in maintaining and improving campus security.

Each employee is to place safety and health requirements as first importance in the performance of their work duties for the **Miami East Local School District**. The protection of students, fellow employees, and the public on the district's property is a shared responsibility of every employee. All employees are responsible for notifying their immediate supervisor of a violation or deficiency in safe and healthful working conditions and for recommending corrective measures, if possible. Additionally, the employee's immediate supervisor is to be notified of every injury or accident regardless of how trivial such accidents may appear at the time.

Disciplinary Procedures for Violations

Students who violate safety and health requirements may be disciplined through the **Miami East Local School District** Academic and Code of Conduct. A student's grade may be downgraded as a result of the student's failure to properly observe safety management procedures within the classroom, laboratory or shop. Student behavior in violation of established safety management policies may be considered a violation of the Student Code of Conduct. Possible sanctions and appeal procedures are set forth in the **Miami East Local School District** Student Handbook.

INSPECTIONS AND COMPLIANCE REQUIREMENTS

The **Miami East Local School District** may require periodic assessment of the following inventory:

1. Environmental (lighting, dusts, gases, sprays, noises)
2. Hazardous materials (flammable and caustic)
3. Equipment (mills, lathes, presses, saws, drills, etc.)
4. Power equipment (boilers, motors, etc.)
5. Electrical equipment (switches, breakers, fuses, outlets, connections)
6. Hand tools
7. Personal protective equipment (safety glasses, ventilators)
8. Personal service/first aid supplies (drinking fountains, first aid supplies)
9. Fire protection equipment (alarms and extinguishers)
10. Walkways/roadways (sidewalks, roadways, docks)
11. Working surfaces (ladders, platforms)
12. Material handling equipment (cranes, dollies, hoists, chains, ropes)
13. Transportation equipment (autos, trucks, vans, fork lifts)
14. Containers (scrap bins, drums, solvent cans, gas cylinders)
15. Structural openings (windows, doors, stairways)
16. Buildings/structures (floors, roofs, planter walls, fences)
17. Miscellaneous (any items not covered above)

Each inspection report will record pertinent safety management violations, noncompliance items, and observe deficiencies. Employees directly involved in the use or operation of the facilities or function being inspected are to participate in the inspection process.

Reporting Noncompliance

Observed violations of safety management standards, deficiencies, and noncompliance items should be reported to the building administrator. Notification of the recorded violations and the arrangement for the accomplishment of appropriate corrective action will be given to the person in charge of the facility or function being inspected and the Safety Management Committee. The responsible person is to respond to the Safety Management Officer indicating corrective action accomplished with regard to each reported violation.

Imminent Danger Action

In the event that any manipulation, process, action or condition is discovered which, in the opinion of the staff or administration, is considered to constitute an immediate threat to the life of any employee or public, the building principal may order the immediate cessation or modification of such manipulation, action, or condition.

Rights of Employees

Any employee who has a direct personal involvement in the facilities being inspected is encouraged to participate in the inspections, including calling possible violations to the attention of the inspector. Furthermore, any employee may report, to the building administration, any observed violations or deficiencies. An investigation of the complaint by the principal, and notification of the results is to be given to the employee originating the complaint. The rights of employees will be exercised without retaliation on the part of any employee of the **Miami East Local School District**.

REPORTING OF ACCIDENTS

All serious accidents as defined below will be investigated by the building administrator and the findings documented as soon as practical:

1. Serious injury to an employee or student
2. Serious injury, caused by operations, to another party
3. Major loss of equipment or property

Any accident should be immediately investigated by the appropriate staff member or faculty member for students. An Accident Report Form should be completed and filed as soon as possible for reporting purposes and for further investigation and resolution. Upon learning of a serious accident involving students, employees, or equipment, an employee must notify the building administrator immediately. Serious accidents will be investigated by the building principal.

MEDICAL EMERGENCIES, FIRST AID, AND MEDICAL TREATMENT

Request for Emergency Medical Assistance

After calling 911, the **Miami East Local School District** should be notified so

that they may direct emergency vehicles to the scene.

Injury Reporting

The **Miami East Local School District** requires to maintain a listing of all workplace illnesses and injuries and to complete a summary report of the findings to the BOE. A serious injury must be immediately reported to the Building principal.

POWER LOSSES

General Information

The **Miami East Local School District** may experience power losses to one or more buildings due to storms, power company disruptions, or damage to the service lines entering the campus. These interruptions can lead to conditions that may result in personal injury or damage to equipment or facilities. This section lists general procedures to be used in the event of loss of power.

Power losses greatly increase the likelihood of an accident due to the following:

1. The loss of lighting increases the possibility of injury to those moving throughout the building/campus.
2. The attendant electrical surge accompanying the restoration of power may damage electrical devices not switched off.
3. The operation of electrical devices during a phase loss may result in damage to these devices.
4. The electrical loss may disrupt telephone service and emergency devices such as fire alarms.

In the event of power loss, every effort should be made to immediately turn off all electrical equipment within an employee's work area before power is restored to protect the equipment. When sufficient lighting exists during day hours to work safely, and the building is comfortable without air conditioning, the building may remain open for operation. During evening operations the building may be evacuated. Further directions concerning class schedules will be provided by the building administrators.

Reporting Power Losses

In general, the loss of power or the disruption in normal electrical service should be reported immediately to the building administrator. Maintenance staff will investigate the scope and condition of power loss and proceed to correct the matter accordingly. In instances when power loss is due to the disruption of utility service, the utility company will be called to restore services.

EMERGENCY PLANNING AND EVACUATIONS

General

The **Miami East Local School District** will delay or cancel class when inclement weather poses concern for the welfare of the students and staff. Employees

should listen to local radio and television stations for updates on the schedule of operation.

Designated Areas to Report During Severe Weather

Individuals should seek the safest areas possible away from exterior windows and doors and along the lowest interior portions of the building. Maps displaying the fire evacuation routes also indicate safe areas during storms. These maps are posted in all buildings on all floors.

Bomb Threat

Bomb threats are delivered in a variety of ways with the majority of threats being called in to the target. In the event of a bomb threat, all personnel will follow the following procedures:

1. The staff member receiving the call should make reasonable efforts to gain as much information as possible. Keep the caller on the line as long as possible. Ask who is calling, and have the caller repeat the message. Write down every word spoken by the person making the call.
 2. If the caller does not indicate the location of the bomb or the time of the possible detonation, the person receiving the call should ask the caller to provide this information.
 3. Inform the caller that the building is occupied and the detonation of a bomb could result in death or serious injury to many innocent people.
 4. Pay close attention to any strange or peculiar background noises such as motors running, background music, or other noises that might give some clue concerning the origin of the call.
 5. Listen closely to the caller's voice, voice quality, accents, and speech impediments. Immediately after the caller hangs up, the person receiving the call should contact the building administrator.
 6. The Building principal will notify the Police Department of the threat.
 7. Evacuation notification procedures will be activated to evacuate the buildings.
 8. The faculty should direct students to exit the buildings consistent with fire evacuation procedures to a distance at least 100 yards or greater away from the buildings.
 9. All staff should exit the buildings to a distance at least 100 yards or greater away from the buildings.
 10. The police and assigned staff will conduct an extensive search of the buildings.
 11. An authorized representative will approve re-entry into the buildings after a search is completed and after consultation with the police.
- A Bomb Threat Checklist has been developed for employee use.

PERSONAL PROTECTIVE EQUIPMENT Policy

Miami East Local School District requires the employees to use personal protective equipment for eyes, face, head, and extremities, together with protective shields and barriers when potential hazards exist. All required personal protective equipment is provided by the **Miami East Local School District** and is to be used and maintained in a sanitary and reliable condition wherever it is necessary due to the hazards associated with a process or the environment (e.g., chemical hazards, radiological hazards or mechanical irritants.) Such hazards include the exposure to or performance of:

1. Hot solids, liquids or molten metals
2. Milling, sawing, turning, shaping, cutting, or stamping of any solid materials
3. Heat treatment, tempering, or kiln firing of any metal or other materials
4. Gas or electric arc welding
5. Repair or servicing of any vehicle
6. Caustic or explosive chemicals or materials

Eye and Face Protection (Employees and Visitors)

Certain areas of the **Miami East Local School District** may be considered areas where eye protection is warranted at all times. These areas will be designated – 100% Eye Protection Areas by the Safety Management Officer.

Employees are required to wear proper eye protection for all work that may expose them to any hazards. Employees with work assignments in close proximity to the performance of these tasks and with a potential exposure to eye injuries are required to wear appropriate eye protection.

Any visitors who enter areas that require the use of safety glasses must be provided with them for protection. Employees who require the use of corrective lenses and are required under this policy to wear eye protection will wear safety glasses designed to fit over their corrective lenses.

Hand/Foot Protection

School employees should wear gloves when their job duties may subject their hands to possible abrasion, cutting, or chemical exposure. Sturdy work shoes are recommended for maintenance and shop work. Athletic shoes and canvas loafers are not recommended as work shoes for maintenance workers and faculty members with shop responsibilities. Employees whose duties involve the use of certain types of power equipment (e.g., lawn mowers, weed eaters, edgers) or the movement of heavy objects should use safety work shoes with metal toes.

SHOP PRACTICES

General

Instructors are responsible for the observance of industry accepted and government mandated safety procedures within the laboratories and shops in

which they teach. This manual does not attempt to specify or mandate procedures for a particular area. The instruction of students in proper safety practices must be incorporated into the content of each course requiring shop or laboratory work.

The observance of safe laboratory or shop practices in the developing tradesman or technician should be an expected outcome. Each instructor is responsible for:

1. Understanding the proper safety practices appropriate to the procedures and machines utilized within their area of instruction
2. Enforcing established or recommended safety rules within their area of instruction
3. Correcting unsafe actions by students or part-time faculty
4. Eliminating unsafe conditions within their areas or resolving them with the assistance of the **Miami East Local School District**.
5. Participating in the safety management program and providing information when requested

OSHA HazCom / GHS
Pictograms


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OSHA aligned its Hazard Communication Standard (HazCom) with GHS in 2012. Effective June 1, 2015, hazardous chemical manufacturers must include GHS pictograms on their product container labels. GHS pictograms consist of a black hazard symbol on a white background surrounded by a red diamond border. A chemical's hazard classification determines which of the pictograms from below appear on its respective label. As of Dec. 1, 2013, all employers covered by the HazCom Standard must ensure their employees are trained on these new pictograms and other GHS label elements.

<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactive • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (Skin & Eye) • Skin Sensitizer • Acute Toxicity (Harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer <i>(Non-Mandatory for HazCom)</i>
<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion / Burns • Eye Damage • Corrosive to Metals 	<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Skull & Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (Fatal or Toxic) 	<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment <i>(Non-Mandatory for HazCom)</i></p>  <ul style="list-style-type: none"> • Aquatic Toxicity

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