Introduction

- This plan covers major workplace fire hazards and their proper handling and storage procedures. It addresses potential ignition sources and their control measures. Personnel positions will be identified responsible for equipment maintenance and controlling fuel source hazards.

General Information

- Fire prevention is the limiting or controlling of any hazards that might, under the proper circumstances, cause a fire. Some of these controls include:
  - Proper installation, operation and maintenance of equipment and machinery.
  - Arranging combustible materials and controlling ignition sources to prevent them from reaching ignition temperatures.
  - Limiting hazards and operating practices that are peculiar to the business.
- The size of the fire and the degree to which it can spread depends upon the fire protection available. Fire protection can be achieved through:
  - Automatic or manual fire control devices such as fire detection systems, automatic sprinklers, special extinguishing systems and fire extinguishers.
  - Physical separation of combustible materials from ignition sources by non-combustible or fire-resistant construction.
- Preventing fires is more important than extinguishing them because no damage can occur if a fire is not allowed to start. The extent to which a company and its employees practice fire prevention largely determines the probability of fires starting.
- Fire Protection efforts should first be directed at those hazards that cause the greatest number of fires or potentially contribute most to financial loss.
  - Fire extinguishment is the suppression of burning to the point where all flame is extinguished, and it is safe to enter the building.
  - Fire extinguishment is the result of fire protection and usually involves a fire department in addition to other fire protection devices and strategies.
- Housekeeping has an impact on fire prevention. Inside and outside housekeeping is imperative for fire prevention. Providing enough clear space free from combustible material and flammable substances limits fires from spreading. Proper housekeeping will provide room for the fire department to maneuver when fighting a fire.
- It is the Company's policy to control accumulations of flammable and combustible waste material and residues so that they do not contribute to a fire emergency. Employees are responsible to keep the work area free of clutter, debris, and other items that contribute to a fire emergency.

Fire Safety Factors to be considered in evaluating our fire prevention program. Some may not be applicable.

	Fire Protection	**Fire Protection**	**Fire Extinguishment**	
PHYSICAL FACTORS	● Fire safe building materials ● Safe electrical wiring & equipment ● Safe heating equipment ● Safe power transmission equipment ● Safe flammable liquid storage ● Safe installation of process equipment, dip tanks, ovens, spray booths, etc. ● Compliance with local codes & NFPA fire safety standards	● Stairways and shafts enclosed ● Percentage of area of value covered by automatic sprinklers or fire detectors ● Use fire walls, fire doors, etc., to separate plant areas ● Protect exposed wall openings ● Location of draft curtains & use of explosion/heat vents ● Operating and safety controls on equipment	<u>Private</u> ● Fire Resistant buildings ● Susceptibility of contents to combustion and water damage ● Fire Evacuation Routes ● Quick access to enough and type of the fire extinguishers required by area's hazards. ● Private water supplies stand pipes and hose, hose houses, hydrants, sprinkler systems, special extinguishing systems, etc.	<u>Public</u> ● City fire alarm system ● Distance from nearest fire station ● Fire department's access to and maneuverability about the premises ● Public water supply of adequate volume, pressure and duration for the risk.
OPERATIONAL FACTORS	● Establish smoking & non-smoking areas ● Preventive maintenance program ● Safe waste disposal ● Educate employees about fire causes ● Fire conscious management ● Premises inspected by supervisors, firefighters and insurance loss control personnel ● Comply with recommendations	● Periodic testing, inspections and maintenance of fire extinguishers, water supplies, sprinklers, valves, hoses, alarms, fire doors, etc. ● Consult about adequacy of protections provided and needed improvements ● Comply with loss control recommendations	● Employees trained to inform management immediately	● Fire department apparatus and manpower available ● Fire department's familiarity with premises ● Compliance with community building and fire prevention laws and ordinances

Sources of Ignition

- Electric Panels, Control Panels, Disconnects
- Forced air furnace
- Electric Forklift
- Grinding
- Welding

Fire Loading

- Office furniture and accessories
- Paper
- Pallets
- Aerosol Cans
- Paint

Equipment Maintenance

- Equipment maintenance and repair are generally performed in-house or outsourced.
- Where outside maintenance is needed, each contractor has a degree of expertise in areas of responsibilities. The contractor will need to exercise a wide range of responsibilities in equipment maintenance/repair.
- Preventative Maintenance: The Company will regularly and properly maintain equipment and the systems installed on heat producing equipment according to the manufacturer's instructions. The purpose is to prevent accidental ignition of combustible materials.

Controlling Fuel Sources

- All employees are responsible for controlling ignition/fuel sources at our facilities.

Training

- Employees will be apprised of the fire hazards of the materials and processes with which they work.
- Managers will brief new employees on the Fire Prevention Plan that may affect them in their new position within their department.
- The Company will annually train employees on ignition and fire loading factors, portable fire extinguishers used in the workplace, provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.
- Annual training will comply with regulatory requirements outlying general employee instruction on types of fires, extinguishers, method of ignition, fire loading characteristics, practical application on fire extinguisher use, etc.

Fire Suppression System

- **General**
    - The company has a fire suppression system installed in both the paint booth and mixing room.
    - This system is maintained by an outside vendor of the company’s choosing every 6 months.
    - This system has an alarm installed with a 30 second timer indicating a trigger which will activate the fire suppression system if it isn’t intercepted.

Fire Extinguishers

- **General**
  - The Company has installed/mounted approved ABC,D, or CO^2 type fire extinguishers throughout the facility based on the hazard of our manufacturing process.
  - Many fires are small at origin and may be extinguished using proper portable fire extinguishers. If a fire occurs, the fire department will be notified as soon as a fire is discovered.
  - Fire extinguishers are an important segment of our fire protection program. Their successful function depends upon meeting the following conditions:
    - The extinguisher is properly located and in working order**.**
    - The extinguisher is of proper type for a fire that may occur
    - The fire is discovered while still small enough for the extinguisher to be effective.
    - The fire is discovered by a person able to use the extinguisher.
  - Fire extinguishers are primarily used on small fires**.**
  - Extinguishers are limited in extinguishing agent, so proper use of the fire extinguisher is important not to waste the contents.
- **Health and Safety Considerations**
  - Dry chemical extinguishers, when used in a small unventilated area, may reduce visibility for several minutes. Dry chemicals, discharged in an area, may also clog the filters in air-cleaning systems.
  - Most fires produce toxic decomposition products of combustion and some materials may produce highly toxic gases
  - Fires may also consume available oxygen or produce dangerously high exposure to convection or radiated heat. All of these may affect the degree to which a fire can be safely approached with extinguishers.
  - The use of dry chemical extinguishers on wet energized electrical equipment may aggravate electrical leakage problems.
  - The dry chemical in combination with moisture provides an electrical path that can reduce the effectiveness of insulation protection.
  - The removal of all traces of dry chemical from such equipment after extinguishment is recommended.

Responsibilities

- **Safety Manager**
  - Approves the Fire Prevention Program.
  - Requires annual employee Fire Prevention training.
  - Ensures budgetary allotments to support the Fire Prevention Program.
  - Delegates the implementation of the day-to-day administrative coordination of the program to the Manager.
  - Point of contact for safety questions and policy on the Fire Prevention Program.
- **Manager**
  - Apprises General Manager of any serious fire safety concerns.
  - Understands the purpose of the Fire Prevention Program.
  - Assigns the day-to-day Fire Prevention Program implementation and day-to-day responsibilities to the employees in the production area.
  - Overall, implements the Fire Prevention Program that will satisfy federal, MN law as well as company requirements.

    - Upon need, establishes specific responsibilities and performance levels for the Employees, etc.
    - Investigates fire related accidents.
    - Requires facility wide Fire Prevention compliance.
    - Requires all employees attend fire prevention safety training.
    - Keeps abreast of fire prevention regulatory changes
    - Ensures that ignition and fire loading sources are minimized.
    - Knows potential fire exists throughout the production process.
    - Enforces Fire Prevention safety rules recommending disciplinary action to the Safety Manager for repeated violation of policies and procedures.
    - Recommends to the Safety Manager changes significantly affecting the facility regarding the Fire Prevention Program.
- **Employee**
    - Understands the purpose of the Fire Prevention Program.
    - Supports company in program implementation.
    - Knowledgeable on the ignition sources in the area.
    - Ensures that fire extinguishers are not blocked, preventing access for fire emergencies.
    - Knowledgeable in the correct use of fire extinguishers on fires that may likely occur.
    - Assures that fire protection used at the facility is accessible.
    - Attends fire prevention safety training sessions.
    - Ensures that ignition and fire loading sources are minimized.
    - Knows potential fire exists throughout the production process
    - Communicates fire prevention safety policies and procedures to fellow employees by example.
    - Makes suggestions to help improve workplace fire prevention safety to their Manager.
    - Reports identified fire ignition/loading risk factors and hazardous conditions that can cause personal injury, property, product and equipment damage.

Inspections

- The frequency of extinguisher inspections should be based on the need of the area in which extinguishers are located. Some areas are more conducive to damage; tampering, etc. that might require more frequent inspections.
- The required monthly inspection is a minimum. The frequency of inspections will be increased if susceptibility to tampering, vandalism, or malicious mischief is detected. Other reasons would include:
    - Possibility of theft.
    - Extinguishers susceptible to mechanical damage.
    - Possibility of visible or physical obstructions (blocking of extinguishers).
    - Noted characteristic of the extinguishers i.e. susceptibility to leakage.

Recordkeeping

- In addition to the required tag or label, a permanent file record should be kept for each extinguisher. The file should include the following information:
    - Possibility of theft
    - Last recharge.
    - Hydrostatic retest date.

    - Required regulatory maintenance records.

Program Review

- The Company will annually review the Fire Prevention Program. The program will automatically be reviewed when a fire occurs on the premises.