

# **Millard Refrigerated Services**

## **Fire Prevention/Use of Fire Extinguishers**

### **Training Outline - NOVEMBER**

#### **Meeting Objectives**

To understand the main causes of fires in a cold storage warehouse and the ways to prevent them. The result should be routine fire safety and prevention practices on the job.

#### **Suggested Materials to Have on Hand**

- Frayed or worn cord
- Container of flammable liquids
- Fire extinguisher
- Disposal container for flammable trash
- Smoking Policy

#### **Introduction/Overview**

Fire. We all fear it, yet we all sometimes do—or fail to do—things that could easily cause a fire. Today, we're going to look at the main causes of fire on the job and, more important, the ways in which we can prevent fires from occurring.

Millard does a lot to prevent fires, such as:

- Using construction materials that are fire-retardant - insulation panels are rated at 1 hour
- Using electric forklifts, not gas or propane. These type can't be used inside anyway
- Installing fire alarms, smoke alarms, and sprinklers
- Providing fire extinguishers

If you discover a fire in the warehouse, you will need to make a decision – to use a fire extinguisher or to report it so that we can dial 911 for the fire department. It is important for you to understand how to use a fire extinguisher and what its' limitations are. It is also important to understand the different types of fire extinguishers to use.

#### **General Hazards**

The hazards of fire are burning, smoke, release of noxious fumes, risk of explosion, etc. For instance, some chemical fires, or fires that break out in areas that contain hazardous chemicals, can release into the air toxic vapors that pose a serious health risk. Sometimes the same things that cause fires also cause explosions, which has happened in a cold storage warehouse before. However, there is little risk of this happening because if there is an ammonia leak, you will evacuate the building as soon as possible before there is a risk of explosion.

#### **OSHA Regulations**

OSHA has specific fire-prevention standards that are found in many different General Industry regulations that affect warehousing operations.

Our fire-prevention plan is required by these standards to contain the following information:

- List of workplace hazards
- Handling of hazardous materials
- Storage of hazardous materials
- Ignition sources (e.g., welding)
- Control procedures for ignition sources
- Names of persons responsible for maintaining fire-prevention equipment
- Names of persons responsible for controlling fuel-source hazards
- Housekeeping procedures for controlling accumulations of flammable/ combustible waste
- The fire hazards of materials/processes to which employees are exposed
- Maintenance procedures for systems installed on heat-producing equipment for preventing accidental ignition.

A copy of the Fire Prevention Program is available if you are interested in reviewing it. (Note: this is required by OSHA)

Even though we are not required by OSHA to have fire extinguishers, we have them available to use just in case. Since we have fire extinguishers, we are required to inspect them monthly and have them maintained annually. We are also required to make sure you know how to use them.

### **Identifying Hazards**

Fire develops from a mix of three components:

- Fuel (paper, oil, wood, etc.)
- Oxygen (present in the air)
- Heat (from flame, electricity, friction, or chemical reaction).

Fire prevention, then, means making sure that these three don't get together. Let's look at some of the specific fire hazards that you find in most workplaces.

Electrical equipment is the #1 cause of workplace fires. They're the result of:

- Overloaded fuses, circuits, motors, or outlets
- Wiring with frayed or worn insulation
- Loose ground connections
- Lights or machinery coming in contact with combustible materials.

Flammable liquids like oil, gas, kerosene, solvents, and many chemicals are a fire hazard mainly because of their invisible vapors. When these vapors, which travel fast through the air and can't be seen, come in contact with an ignition source, you have a fire.

Smoking is another cause of fire. Lit cigarettes or matches can easily ignite anything that is capable of burning, such as wood, paper, or flammable liquids. **Smoking is not allowed in the warehouse areas.** (If you have designated smoking areas, identify them)

Welding and cutting operations are a fire hazard because of the flames and sparks they create. Spontaneous combustion is another cause of fire. That's the slow buildup of heat in flammable materials that eventually erupts into fire.

Chemicals that are not a major fire hazard alone may become one when they're mixed with an incompatible substance—air, water, heat, or other chemicals. This is known as reactivity. Ammonia can react to a spark, but the conditions have to be just right .

### **Protection Against Hazards**

You protect yourself—and the rest of us—against fire hazards by using caution and common sense when you work around something that could cause a fire. And, as you can see, that's almost anything.

Generally, you won't be using equipment that can cause a fire. But let's take the types of hazards that you may be exposed to:

Electrical equipment and wiring. Here, there are several keys to protection:

1. Never use wiring whose insulation is frayed or worn. This includes the wiring on forklifts and pallet jacks that may be visible. Report any problems so they can be fixed.
2. Don't keep any materials that could catch fire near lights or machinery.

Flammable liquids. As we mentioned, the biggest danger here is those flammable vapors. So here are the keys to protection:

1. Check material safety data sheets to determine if a liquid is flammable before you use it. This may relate to some cleaning solutions and sulfuric acid.
2. Only use flammable liquids in areas with plenty of ventilation.
3. Don't use them near heat, fire, cigarettes, sparking tools—anything that could ignite them.
4. Store flammable liquids in approved, airtight, metal containers, away from ignition sources.
5. Keep containers closed when not in use.
6. Clean up leaks and spills immediately.

Welding and cutting. Welding in our facility is only done by properly trained personnel and by using a hot work permit system. This system ensures that proper procedures are followed when performing welding and cutting.

To protect you against a fire hazard, we also have fire extinguishers. There are four types of fire extinguishers as designated by the National Fire Protection Association:

1. **Class A** extinguishers are used to put out fires involving ordinary burnables like wood, paper, rags, etc.
2. **Class B** extinguishers are used to put out fires involving gases or flammable liquids such as oil, gasoline, paint or solvents.
3. **Class C** extinguishers are used for fires involving or surrounding electrical equipment fires.

4. **Class D** extinguishers are used for fires in combustible metals, which we don't have

Our fire extinguishers are combination ABC extinguishers which means they use a dry chemical that can handle all three types of fires.

### **Safety Procedures**

In our warehouse, a lot of the safety procedures that prevent fires are really good housekeeping—keeping things where they should be and getting rid of things that shouldn't be there. Here are some critical good housekeeping "Do's and Don'ts" for fire safety:

DO:

- Dispose of all waste promptly and properly.
- Keep work areas clean and free of dust and lint.
- Keep doorways and passageways clear.

DON'T:

- Store materials so high that they block sprinklers.
- Let waste materials accumulate in the work area.
- Smoke only in designated areas.

### **Demonstration**

Since we use a combination ABC extinguisher, which will handle the types of fires we may have in the warehouse, all you need to know is how to operate it. (Note: You can demonstrate how to use an extinguisher outside without an actual fire). The operating procedure is fairly simple:

1. Pull the pin.
2. Stand about eight feet from the fire.
3. Aim at the base of the fire.
4. Squeeze the trigger.
5. Clean up the area as quickly as possible.

Remember, just because we have fire extinguishers in the warehouse, don't try to be a hero. If you don't think you can extinguish the fire, notify your supervisor or plant manager as soon as possible or you may even need to dial 911 yourself. (Note: discuss this with your employees)

### **Wrap-Up**

Fire is a pretty fearsome thing, and we all want to do everything we can to prevent it. While it seems that we covered a lot of details today, it really boils down to a few things:

- Know what can cause a fire: electricity, flammable liquids, smoking, welding and cutting flames and sparks, and reactive chemicals.
- Keep anything that can cause a fire away from anything that can burn.
- Keep flammable materials and substances in their assigned places.
- Don't smoke around anything that could burn.
- Keep the work area neat and clean so burnables don't accumulate.