

For **Construction**

FIRE EXTINGUISHER TRAINING

Modern solutions to prepare and protect
construction crews.



LION®



Introduction

Construction sites are full of potential fire hazards. These include temporary electrical and heating systems, flammable liquids and piles of debris—not to mention activities like welding and grinding that can quickly spark a fire. Add in constantly changing site conditions and multiple contractors, and it's a recipe for a fire emergency.

That's why fire extinguisher training is so important for people who work at or operate construction sites. **Proper training helps workers recognize different types of fires, choose the appropriate extinguisher and respond quickly under pressure.** And it helps employers, building owners and facility managers protect their people, properties and equipment.

This paper explores fire extinguisher training for the construction industry. It also addresses fire science basics and regulatory requirements—plus modern training tools that can help employers meet OSHA and NFPA requirements.



A Widespread Problem

More than 4,000 fires occur on average each year at construction, renovation and demolition sites in the United States, according to the National Fire Protection Association (NFPA). These fires can cause significant property damage, project delays, injuries and even death.

The financial fallout of a construction fire can spread far beyond the worksite. When sites close after a fire, crews are often out of a job—which can be a devastating blow to workers. Fires also can strain local economies by forcing affected businesses to shut down. And, finally, fires can expose employers and property owners to liability lawsuits.

Fire extinguishers serve as the first line of defense during the early stages of a fire. But for that defense system to work, employees need quality extinguisher training.

ANNUAL COST OF CONSTRUCTION FIRES

5

civilian deaths

62

civilian injuries

\$375 million
in property damage

Source: NFPA

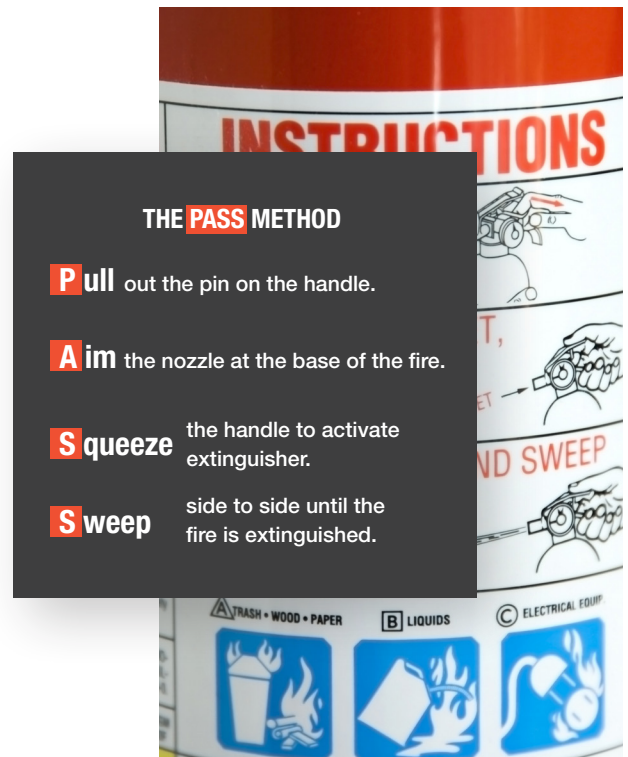


The Importance of Hands-On Training

While theoretical knowledge is valuable, hands-on extinguisher training shows users how to respond safely to a real fire emergency.

Training helps them:

- ✓ **Develop muscle memory:** Handling an extinguisher helps build confidence and familiarity, making it easier to act under pressure.
- ✓ **Understand PASS:** Training reinforces the (PASS) method and helps instill proper techniques.
- ✓ **Assess fire situations:** Practice helps workers know when a fire can be extinguished and when evacuation is the best option.
- ✓ **Enhance decisions:** When people train in simulated conditions, they're more likely to react correctly in real, high-stress situations.



Fire Classifications & Proper Extinguishers

Construction sites commonly encounter multiple fire classes, often within the same work area.

CLASS A

Ordinary combustibles (wood, paper, cloth, many building materials)

Use water, foam or multipurpose dry chemical extinguishers

CLASS B

Flammable liquids (gasoline, oils, solvents, adhesives)

Use foam, CO₂ or dry chemical extinguishers

CLASS C

Energized electrical equipment

Use CO₂ or dry chemical extinguishers

CLASS D

Combustible metals (magnesium, aluminum, titanium)

Use special dry powder extinguishers

CLASS K

Cooking oils and fats (less common but applicable in temporary kitchens)

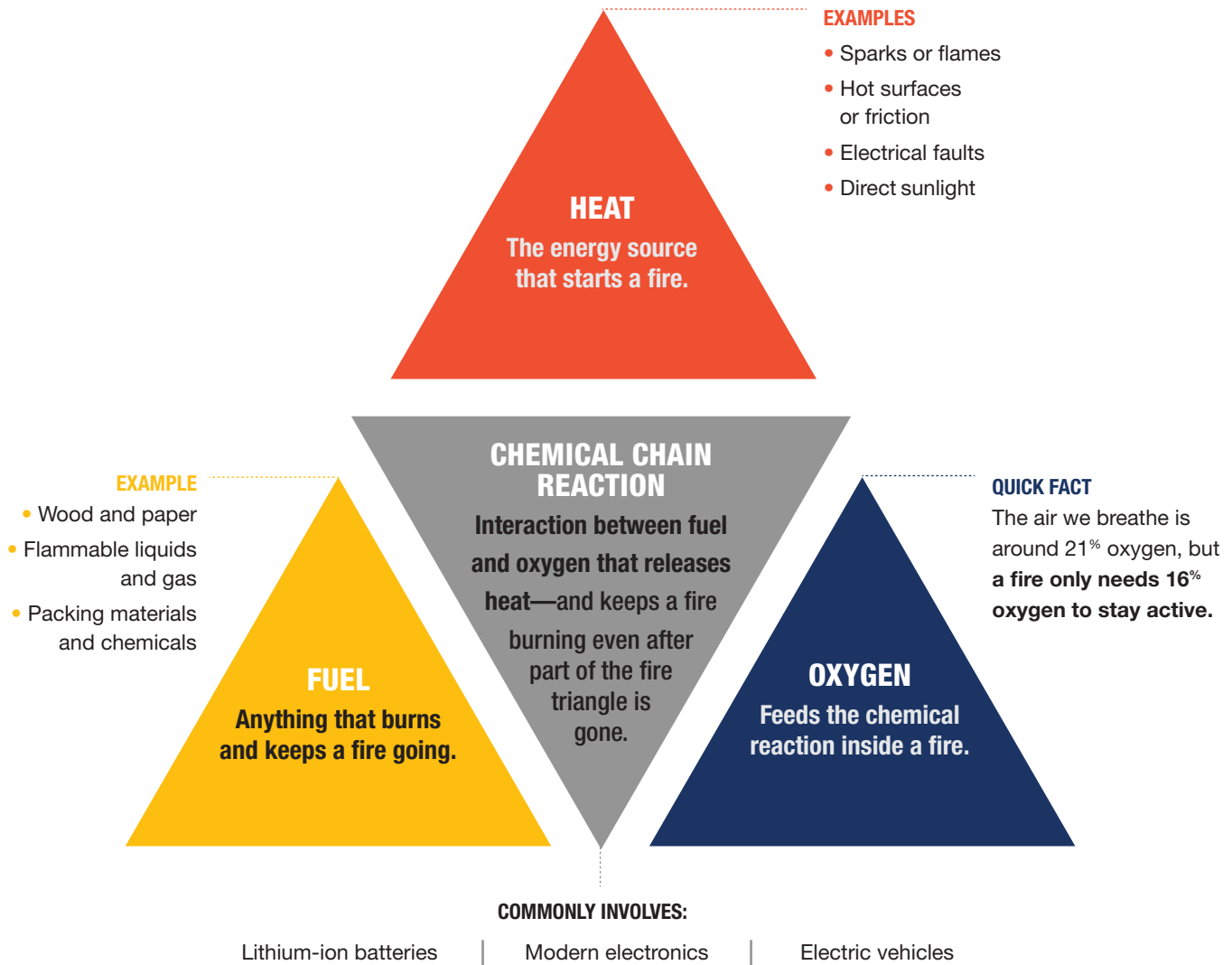
Use wet chemical extinguishers

All fire extinguishers are labeled to show which fires they are designed to extinguish. This is important because using the incorrect extinguisher can spread flames and worsen the incident.



Inside the Fire Tetrahedron

To understand how extinguishers work, you first need to understand the science behind fires. For decades, the fire triangle was the building block of fire safety training. It consisted of heat, fuel and oxygen. But modern science has introduced a fourth element—the chemical chain reaction—to create the fire tetrahedron.



PUTTING OUT THE FLAMES

To extinguish a fire, you need to do at least one of the following:

- Cool the fire to remove heat
- Remove or isolate the fuel to stop combustion
- Smother the fire to deplete oxygen
- Interrupt the chemical reaction to end self-sustaining flames



OSHA & NFPA Requirements

Workplaces must adhere to OSHA 1910.157 regulations for extinguisher placement and training. Among the requirements for employers:

- Install portable fire extinguishers where fire hazards exist
- Provide hands-on extinguisher training to employees at least once a year



NFPA 10: Standard for Portable Fire Extinguishers also provides comprehensive requirements for workplaces.

These include:

Proper extinguisher selection and installation

Inspection frequency and maintenance



Monthly Inspections

- Confirm extinguishers are in designated locations
- Verify pressure gauges are within operational range
- Check for physical damage or corrosion
- Ensure access is unobstructed



Annual Servicing

- Conducted by certified professionals
- Includes internal inspection and servicing
- Extinguishers recharged or replaced as needed



Conclusion: Be Proactive, Not Reactive

Fire extinguisher training is an essential part of workplace safety. It's not a "nice to have" offering for the construction industry.

It's required.

Effective training programs reduce risks, protect properties and save lives. With quality hands-on training, you can prepare your workers to respond quickly—and safely—in an actual emergency.

And while the best training may not be the cheapest option, the best solutions help pay for themselves. They're repeatable and scalable, which helps you stay on budget.

Put simply, an investment in fire extinguisher training is an investment in your organization's overall safety and well-being.



Real, Safe Extinguisher Training

Traditional live-fire extinguisher training is messy, costly and time-consuming. LION's digital training solutions are a better alternative.



Digital flames and extinguishers

Our BullsEye™ system features LED flames and laser-driven extinguishers to mimic a real blaze. It lets you train in any setting where fires can occur—construction sites, manufacturing floors and more.



Integrated sights and sounds

You can pair the BullsEye system with a R.A.C.E. Station to ramp up the realism. Short for Rescue, Alert, Confine and Extinguish, this system features phones, pull stations, strobe lights and alarms.



A next-level virtual experience

Our newest product, QuickFire™, is an extended reality system that lets you battle virtual flames in realistic environments. Its VR headset and training extinguisher are high-tech—and highly effective.



We've been in business for more than 125 years, and we're a global leader in fire safety. Our dedicated employees manufacture and sell protective gear and uniforms for firefighters around the world. We also provide fire safety training products and PPE maintenance and repair. Together, we keep people and resources safe—and we prepare fire and safety leaders for whatever comes next.