



Putting Out Fires, Part 1

Every so often, a rag catches fire. You grab the nearby extinguisher and – poof, the fire’s out. No harm done. See, fire extinguishers are quite easy. You might be amazed, then, to find out how regulated they actually are. It isn’t just by luck or chance that the right extinguisher was at hand and worked correctly. There’s a reason you pay some company to come in and do something or other to your fire extinguishers each year.

Both OSHA and the Fire Code tell us that you need to have the right type of fire extinguishers. They have to be maintained. And anyone who might use one needs training.

Have you seen any water-filled extinguishers in your shop? If you have, they are probably quite old. We suggest you get rid of them, in fact. They may be legal (if maintained), but completely unsuitable for your facility. They’re Type A extinguishers, only suitable for paper and wood fires. If you try to use one on a pool of burning gasoline in your shop, you’ll only spread the fire.

Most of the extinguishers you have are ABC dry chemical extinguishers. They’ll put out that paper fire, but they’ll also handle electrical fires and flammable liquid fires. How do you know if it’s an ABC extinguisher? It will say so on the label. In addition, ABC extinguishers typically have gauges on them.

If you have some extinguishers without gauges but with big nozzles, they’re probably carbon dioxide (CO₂) extinguishers. They’ll work on electrical and flammable liquid fires, but won’t be effective on paper fires. Why have them? Because you have a lot of flammable liquids in your shop. Remember, the gasoline in all of the vehicles catches fire more readily than paint thinner.

Some of you may have been told by your fire extinguisher supplier that you should get a class D fire extinguisher. That one won’t work on paper, flammable liquids, or electrical fires. So what’s it good for? Metal fires. Metals such as magnesium.

Magnesium is used in a number of parts of the vehicle: steering wheels, instrument panels, seat frames, and power trains, for instance. When it is in a solid block, you don’t need to be concerned about it suddenly igniting. But if you machine it, you create small pieces. These ignite very easily. And if the car starts on fire, the solid magnesium pieces can burn. Once on fire, magnesium burns very intensely and very hot.

Magnesium alloys cannot be put out with the standard ABC fire extinguisher. A water fire extinguisher would make the fire worse: it would actually provide oxygen to the fire. Class D extinguishers, which may contain a salt or copper-based material, are needed. Firefighters will probably use water on magnesium fires, to cool the fire, but a very large amount of water is needed.

How do you know how many extinguishers you need and where they should be? If the risk is a paper fire, no one should have to travel more than 75' to the extinguisher. If, as is more likely, it is a flammable liquid fire, make sure you have an extinguisher within fifty feet. They need to be mounted on the wall, so they aren't moved or damaged. They also need to be easy to find. To ensure that, install signs showing where the extinguishers are. But signs aren't enough. Put the extinguishers somewhere likely to remain accessible. We've seen too many extinguishers hidden behind boxes, blocked by tool carts, and used as coat hangers, rag holders, or hose reels.

When you need an extinguisher, you have only seconds to act. Fires can double in size in a minute. If you can't get to the extinguisher, you've lost precious time. If the extinguisher doesn't work, or you don't use it correctly, you've lost time. You can prevent those problems. But how to do so will wait until next time.



Water Extinguisher (Type A)



Dry Chemical (ABC)



CO₂ extinguisher (BC)



Class D extinguisher

This article is intended to provide general information (not advice) about current safety topics. To discuss your specific concerns and how CHESSE may help, please contact CHESSE at 651-481-9787 or at chess@chess-safety.com.