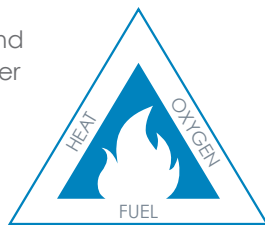


Spontaneous Combustion

Combustible materials soaked with thinners, solvents and organic substances can heat up through oxidation and ignite or spontaneously combust.

Issue

Three items are needed to start a fire: heat, oxygen and fuel. Oil soaked rags or other combustible materials can generate heat through oxidation until they reach ignition temperature and burst into flames.



Since the heating process requires a constant flow of oxygen, limiting the amount of oxygen can stall the heating process and prevent ignition.

Linseed oil is an organic oil extracted from flax seed. It's found in many wood finishes like paints and stains and is highly prone to spontaneous combustion. There are many documented cases of spontaneous combustion due to the improper handling of linseed oil soaked materials. The necessary precautions must be taken when handling rags, steel wool or other waste materials soaked in these finishes.

We recently had a large property loss in excess of \$1,000,000 that happened as a result of spontaneous combustion and linseed oil based stain. In this instance, a contractor piled rags and other combustible materials on the floor of a shed. They ignited, burning down the shed and spreading the fire to an adjacent house.

Solution

Placing oil-soaked materials in sealed metal containers like oily-waste cans. They're made of sheet metal, have self-closing covers and are elevated to prevent the heat from a fire from igniting a wooden floor or other combustible under it. While materials inside the container will begin the heating process, they'll likely run out of oxygen before a fire can start.

Wood finish manufacturers recommend that rags, steel wool or waste gets placed in a sealed, water-filled metal container to prevent fires.

Make sure to also review how to handle materials that are prone to spontaneous combustion with employees and make this a part of your safety program.



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