SAFETY MATTERS TRAINING FROM KMIT





SPONTANEOUS COMBUSTION FROM OILY RAGS

Spontaneous combustion of oily laundry occurs when a flammable or combustible substance is slowly heated to its ignition point through oxidation. A substance will begin to release heat as it oxidizes. If this heat has no way to escape, the temperature will raise to a level high enough to ignite the oil and ignite the laundry. For no apparent reason, fire erupts, usually during off hours – as the materials have had time to react. It is called spontaneous combustion and prevention is part of your job.

OXIDATION PROCESS

Spontaneous combustion occurs when a combustible object is heated to its ignition temperature by a chemical reaction involving the oxygen in the air around us. This oxidation process creates heat that, if not dissipated, will build up until ignition occurs. Generally, this can happen when the materials are left in piles and the heat being generated in the pile cannot be released into the air.

SUSCEPTIBLE MATERIALS

A number of materials are moderately or highly subject to spontaneous heating and subsequent ignition. Some of those you may find in your work area include:

- oil based paint in contact with rags, cotton, or other fibrous combustible material
- rags that are damp with any one of a number of different types of oils, including vegetable oils
- oily uniforms or work clothes
- paint scrapings, possibly coming from a paint spray booth cleaning project.

PREVENTION

It is simple to prevent spontaneous combustion, since oxygen is needed for a fire to occur. Materials prone to spontaneous ignition should be stored in airtight metal rag safety cans. While the container will hold some oxygen, the oxidation process will use up any oxygen within the container and the fire will "suffocate" inside of the bin instead causing a major loss. Lids on these containers must always be completely closed and cannot be propped open by overflowing laundry or rags hanging over the edge.



AIRTIGHT METAL RAG SAFETY CAN

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from Oily Rags	Date:
Company Name:	Location/Dept:
Instructor Name:	Instructor Signature:
Print Name:	Sign Name: