



Q1. What is meant by “Spontaneous Combustion”?

- A. “Spontaneous Combustion” refers to the ability of certain materials to ignite **without** any flame, spark, heat or other ignition source. One definition is “Combustion that results when materials undergo atmospheric oxidation at such a rate that the heat generation exceeds heat dissipation and the heat gradually builds up to a sufficient degree to cause the mass of material to inflame.”¹

Q2. What materials can spontaneously combust?

- A. A number of common materials² including linseed oil, alkyd enamel resins, and drying oils can ignite spontaneously under certain circumstances. Some PPG Coatings products, as well as some products from other manufacturers, contain materials that have the potential to spontaneously combust. PPG’s Safety Data Sheets (SDS) and product warning labels or container information for products containing these materials warn of the dangers of spontaneous combustion.

Q3. How does spontaneous combustion occur?

- A. Oils, resins or other materials that have the potential to spontaneously combust can generate enough heat through auto-oxidation (oxidation as a result of contact with air) to exceed the ignition temperature of the rags, filters, or other combustible materials on which they are deposited, which can cause the materials to spontaneously catch fire. Note that spontaneous combustion can begin **without** any flame, spark, heat or other ignition source.

Q4. What circumstances can lead to spontaneous combustion?

- A. In general, spontaneous combustion can occur when towels, rags, booth filters, paint scrapings, steel wool, masking and other materials wetted or saturated with linseed oil, alkyd enamel resins and drying oils are not handled or disposed of properly.

Q5. How do I handle or dispose of these materials properly in order to prevent spontaneous combustion?

- A. Paint scrapings, used paint filters, rags and other materials wetted or saturated with products that have the potential to spontaneously combust should not be left unattended. Clean up and properly dispose of these materials promptly. These materials should NOT be disposed of in regular waste containers. To dispose of these materials properly, thoroughly wet the contaminated materials with water and place them in a noncombustible container with a tight-fitting lid, or place them in a water-filled metal container.³ PPG’s Safety Data Sheets and product labels or container information warn of the dangers of spontaneous combustion and recommend safe disposal practices. You should always consult the SDS and label for the product you are using to identify those products that may present a spontaneous combustion hazard.



References:

- ¹ Hazardous Chemicals Handbook (2nd Edition) Carson, Phillip A.; Mumford, Clive J. © 2002, Elsevier.
- ² National Fire Protection Handbook (18th Edition) February 1997, Table A-10, Materials Subject to Spontaneous Heating
- ³ NFPA 33: Standard for Spray Application Using Flammable or Combustible Materials, 2007 Edition.

For additional information, contact your PPG Representative or PPG Product Stewardship.

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