



Partitions for Covid-19 Separation

Background. Building owners and tenants are inquiring about the use of partitions to provide separations or barriers as a precaution against COVID-19 spread. Certain types of materials used in participations increase the fire safety risk, specifically the plastic and fabric materials described below. Keep in mind, the placement of the partition and how it is secured will also need to be assessed to meet fire and building code requirements.

Fabric Materials. Many modern fabrics contain large amounts of plastics. If the fabric uses synthetic materials (polyester, rayon, nylon, etc.), they are made partly or entirely from plastics. Modern fabrics made entirely of natural materials – like cotton, wool, silk, or linen – are somewhat rare.

Rigid or Solid Plastics. Rigid or solid plastic materials are the most difficult to ignite; it typically takes a significant amount of heat to cause these plastic materials to burn, but once they catch fire, they burn very hot and give off very toxic smoke and gases. Common examples of rigid plastic materials include acrylic (polymethyl methacrylate, or PMMA), polycarbonate, and polyvinyl chloride (PVC).

Foam Plastics. Foam plastics are often used as insulation materials. They are easy to ignite, even with a small heat source. They burn very rapidly and give off extremely toxic smoke and gases. Common examples are polyurethane and polystyrene which many people call “Styrofoam”.

Flexible Plastics. Flexible plastics come in a wide range of products, from synthetic fabrics to garbage bags. Flexible plastics are easy to ignite with a small heat source and spread rapidly, especially in a vertical position. Common flexible plastics include polyethylene and polypropylene, although PVC can be made flexible with the addition of a plasticizer during the manufacturing process.

Fire and Life Safety Concerns. Plastics are often a petroleum-based product and can burn very fast and hot. When exposed to heat, these materials can also melt and drip, causing burns to people. The same is true for fabrics containing large amounts of plastics.

Fire and Building Code Requirements for Partitions. Plastic materials and fabrics are required to meet certain fire performance tests, and reports of those tests should be furnished by the manufacturer. Acceptable tests are NFPA 710 – Test Method 1 or 2 and NFPA 289.

Quantity of Plastic and Fabric Partitions Allowed. The following are the quantity limits of plastic and fabric partitions that are allowed:

- Plastic and fabric partitions in assembly, business, office, educational, retail and mercantile occupancies: **NOT TO EXCEED 10% OF WALL OR CEILING AREA** (non-tested material).





- Plastic and fabric partitions in business, office, retail and mercantile occupancies: **NO LIMIT WHEN THEY COMPLY WITH AN ACCEPTED TEST.**

- Foam plastics in assembly, business, office, educational, retail and mercantile occupancies: **NOT TO EXCEED 10% OF WALL OR CEILING AREA WHEN THEY COMPLY WITH AN ACCEPTED TEST.**

How is This Measured? Measure the wall or ceiling area that the partition or hanging is attached to and multiply it by the surface area allowed.

What are Some of the Things to Consider When Choosing a Material?

- Choose materials that meet the flame resistive requirements in the fire code.
- Aftermarket flame-retardant treatments must be performed by a **certified company** with the certificate of compliance maintained onsite.
- Ensure any chemicals in your decontamination/cleaning process do not affect the fire-retardant material.

Where Can I Place the Partitions? There are some limitations on where they can be placed to avoid creating a hazardous condition for all occupants.

- Combustible partitions must be kept away from any open flame or high heat producing devices to include candles, flaming foods, portable heaters, smoking materials, etc.
- Partitions, regardless of the material they are made of, shall not interfere with an exit, exit pathway, exit door, or any other component associated with exiting.
- They can not be supported or hung from fire sprinkler piping or other building features that may fall if the partition is pulled.
- They can not cover or obstruct access to fire extinguishers, fire pull stations, or any other fire protection equipment.
- In buildings with fire sprinklers, partitions must be installed 18' below sprinkler heads to ensure the sprinklers operated effectively.

For additional information or assistance, please contact our Fire Marshal's Office at (425) 276-9580.