



# Partitions for COVID-19 Separations

June 2020

## 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 partitions 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 some 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 and hangings

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 and hanging allowed

The following are the quantity limits of plastic and fabric partitions and hangings allowed:

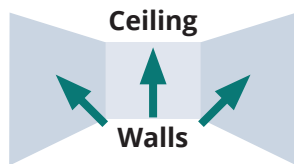
- Plastic and fabric partitions in assembly, business, office, educational, retail and mercantile occupancies: Not to exceed 10% of wall or ceiling area they are attached to.
- Plastic and fabric partitions in business, office, retail and mercantile occupancies:

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 they are attached to when they comply with an accepted test.

### How is this measured?

Wall surface area is shown in the diagram in blue. Measure the wall or ceiling area that the partition or hanging is attached to and multiply it by the surface area allowed.



Note: the fourth wall is not shown in the diagram.

### What are some of the things to consider when choosing a material?

- Choose material meets the flame resistive requirements in the fire code. In other words, if a flame is introduced to the material, will it ignite and continue to burn.
- 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 if they are made of combustible or non-combustible materials shall not interfere with an exit, exit pathway,

exit door, or any other component associated with a means of egress.

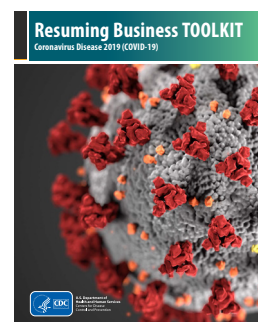
- Partitions cannot be supported or hung from fire sprinkler piping or other building features that may fail if curtain is pulled.
- Partitions cannot cover or obstruct access to fire extinguishers, fire pull stations, or any other fire protection equipment.
- In buildings with fire sprinklers, partitions must be installed 18" below sprinkler heads to ensure the sprinklers operate effectively.

### What are some recommendations?


- Use a non-combustible material for your partition. The repeated use of a decontaminant on combustible materials can in fact increase the flammability of the fabric, especially those that are alcohol based.
- Plexiglass, although a flammable material, takes a longer exposure time to an open flame to ignite when compared to plastic sheeting, shower curtains, etc. and can be a viable option.
- Carefully plan out how and where your partitions will be placed. Keep in mind the limitations noted above.
- When in doubt contact the Bellevue Fire Department Prevention Division. We may be able to help you decide which options will work best for providing protection for your customers while adhering to the fire code.

More information:

[cdc.gov/  
coronavirus/2019-ncov/downloads/  
community/Resuming-Business-Toolkit.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/Resuming-Business-Toolkit.pdf)



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 For alternate formats, interpreters, or reasonable accommodation requests please phone at least 48 hours in advance 425-452-6874 (voice) or email [kcarlson@bellevuewa.gov](mailto:kcarlson@bellevuewa.gov). For complaints regarding accommodations, contact City of Bellevue ADA/Title VI Administrator at 425-452-6168 (voice) or email [ADATitleVI@bellevuewa.gov](mailto:ADATitleVI@bellevuewa.gov). If you are deaf or hard of hearing dial 711. All meetings are wheelchair accessible.