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Standard Guide for Fire Hazard Assessment of the Effect of Upholstered Seating Furniture Within Patient Rooms of Health Care Facilities[1]

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INTRODUCTION

The traditional approach to codes and standards is the specification of individual fire-test-response requirements for each material, component or product placed in a certain environment and deemed important to ensure fire safety. This practice has been in place for so long that it gives a significant level of comfort: a manufacturers knows what is required to comply with the specifications and specifiers apply the requirements. Implicit assumptions, not stated, are that the use of the prescribed requirements ensures an adequate level of safety. There is no need to impose any change on those manufacturers who supply safe systems meeting existing prescriptive requirements. However, as new materials and products are developed, manufacturers, designers, and specifiers often desire the flexibility to choose how the overall safety requirements are to be met. Thus, it is the responsibility of the developer of an alternative approach to state explicitly the assumptions being made to produce the output. The way to generate explicit and valid assumptions is to provide a performance-based approach, based on test methods providing data in engineering units, suitable for use in fire safety engineering calculations, as this guide provides. The resulting fire hazard assessment focuses on upholstered seating furniture items within patient rooms in health care occupancies. This requires developing the fire scenarios to be considered and the effect of all contents and design considerations within the patient room which are potentially able to affect the resulting fire hazard. This offers opportunities for innovation, and ingenuity, without compromising safety.

1. Scope

1.1 This is a guide to developing fire hazard assessments for upholstered seating furniture, within patient rooms of health care occupancies. As such, it provides methods and contemporary fire safety engineering techniques to develop a fire hazard assessment for use in specifications for upholstered seating furniture in such occupancies.

1.2 Hazard assessment is an estimation of the potential severity of the fires that can develop with certain products in defined scenarios, once the incidents have occurred. Hazard assessment does not address the likelihood of a fire occurring, but is based on the premise that an ignition has occurred.

1.3 Because it is a guide, this document cannot be used for regulation, nor does it give definitive instructions on how to conduct a fire hazard assessment.

1.4 This guide is intended to provide assistance to those interested in mitigating the potential damage from fires associated with upholstered furniture in patient rooms in health care occupancies.

1.5 Thus, this guide can be used to help assess the fire hazard of materials, assemblies, or systems intended for use in upholstered furniture, by providing a standard basis for studying the level of fire safety associated with certain design choices. It can also aid those interested in designing features appropriate to health care occupancies. Finally, it may be useful to safety personnel in health care occupancies.

1.6 This guide is a focused application of Guide E1546, which offers help in reference to fire scenarios that are specific to upholstered furniture in health care occupancies, and includes an extensive bibliography. It differs from Guide E1546

[1] This guide is under the jurisdiction of ASTM Committee E05 on Fire Standards and is the direct responsibility of Subcommittee E05.33 on Fire Safety Engineering.

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