

Sprinkler Systems – Retail Storage Guidance

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Introduction

Maintaining storage in accordance with the design capability of the sprinkler system is critical in ensuring that the sprinkler system will control a fire as expected. This document provides storage guidance for Retail Occupancies, e.g. Shopping Centres, Retail Parks, High Street Stores, etc., where sprinkler protection is typically designed to the LPC Sprinkler Rules: Ordinary Hazard Group 3.

Typical Storage Methods and Descriptions



Free Standing

Goods are stored free standing in stacks/blocks directly on the floor.



Shelving

Goods are stored on solid or slatted shelving with a maximum depth of 1m. Also used to determine limitations for similar arrangements, e.g. low-level (non-intensive) hanging garment storage.



Gondola Shelving

Goods are stored on solid or slatted shelving incorporating a central, full height metal barrier with a maximum depth of 1.2m, i.e. 2 x 0.6m shelves either side of the barrier.



Mobile Shelving (Moveable Racks)

Goods are stored on shelving systems which in turn are mounted perpendicular to runners/rails, allowing the shelving to move horizontally. In addition to the restrictions detailed below, the following are also required:

- Shelving needs to be open mesh construction, including any top sections
- Minimum 75mm stops need to be provided to prevent adjacent shelving from fully abutting one another when closing

Restrictions for all Storage Configurations

- Each storage block needs to be limited to 50m² in plan area
- Each storage block needs to be segregated by a minimum of 2.4m clear aisle spaces
- The maximum storage height as determined in the LPC Sprinkler Rules is not to be exceeded
- A minimum clear space of 0.5m is to be maintained from the top of all storage to the sprinkler heads

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Note: The clear space requirement noted takes precedence over any storage height limitations, and where ceiling heights are restricted, it may be necessary to reduce storage levels to below the maximum permitted height to ensure that adequate clearances are maintained throughout the storage area.

Examples of Goods Categories and Applicable Storage Height Limitations to Comply with the Requirements of the LPC Sprinkler Rules

Note: The following list is not exhaustive and is only applicable where the goods packaging is no more hazardous than a cardboard box or a single layer of corrugated cardboard wrapping.
Where packaging and/or the exposed surface contains plastics, foams, rubbers, etc. then the effect of this added material needs be taken in to account and should be referred to Aviva for further guidance.

Stored Goods	Maximum Storage Height	
	Free Standing	Shelved
Category 1 Examples: Crockery Porcelains Ceramics Glassware Metal Goods Tinned Foods	4.0m	3.5m
Category 2 Examples: Books Cards Clothing (Natural Fibres) Confectionary Leather Goods Shoes Timber Goods	3.0m	2.6m
Category 3 Examples: Clothing (Synthetic Fibres) Electrical Goods Plastic Toys and Games Rigid Plastic Goods Synthetic Materials/Fabrics Synthetic Soft Furnishings	2.1m	1.7m
Category 4 Examples: Candles Expanded Plastics Foam Goods Luggage Tissue Paper	1.2m	1.2m

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