

# Water mist for tall buildings

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# Property Assessment - Fire

A site based assessment considering property fire exposures and their controls

Construction	Fire divisions Building combustibility
Management programs	Hot work / contractor controls Housekeeping & smoking controls Training Maintenance practices Management programs
Fixed fire detection and protection	Fixed fire protection incl. sprinklers Fire detection
Utility and incidental hazards	Electrical systems and equipment Heating & cooling Incidental hazards
Process hazards	Control of process hazards Flammable liquids, gases and dusts
External exposures / arson	External exposures Arson Yard storage
Manual fire fighting	Fire team Fire brigade & water supply

Conducted by a Zurich risk engineer, the assessment would include discussions with site staff to understand site exposures and controls, a detailed tour of the site and closing meeting to communicate initial findings, considering:

## Loss estimates

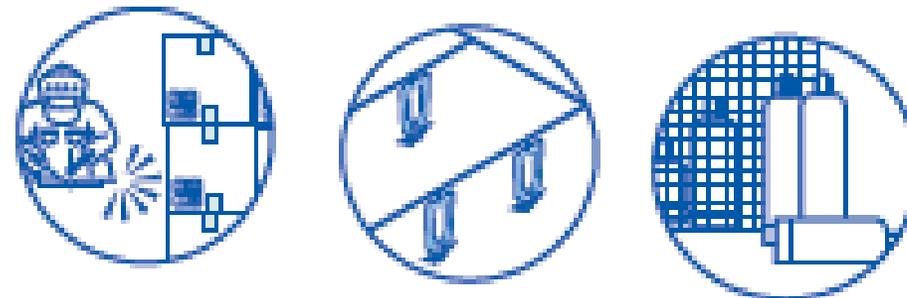
To identify the potential loss from a fire event + also Natural Hazards, Business Interruption, Machinery Breakdown.

## Grading

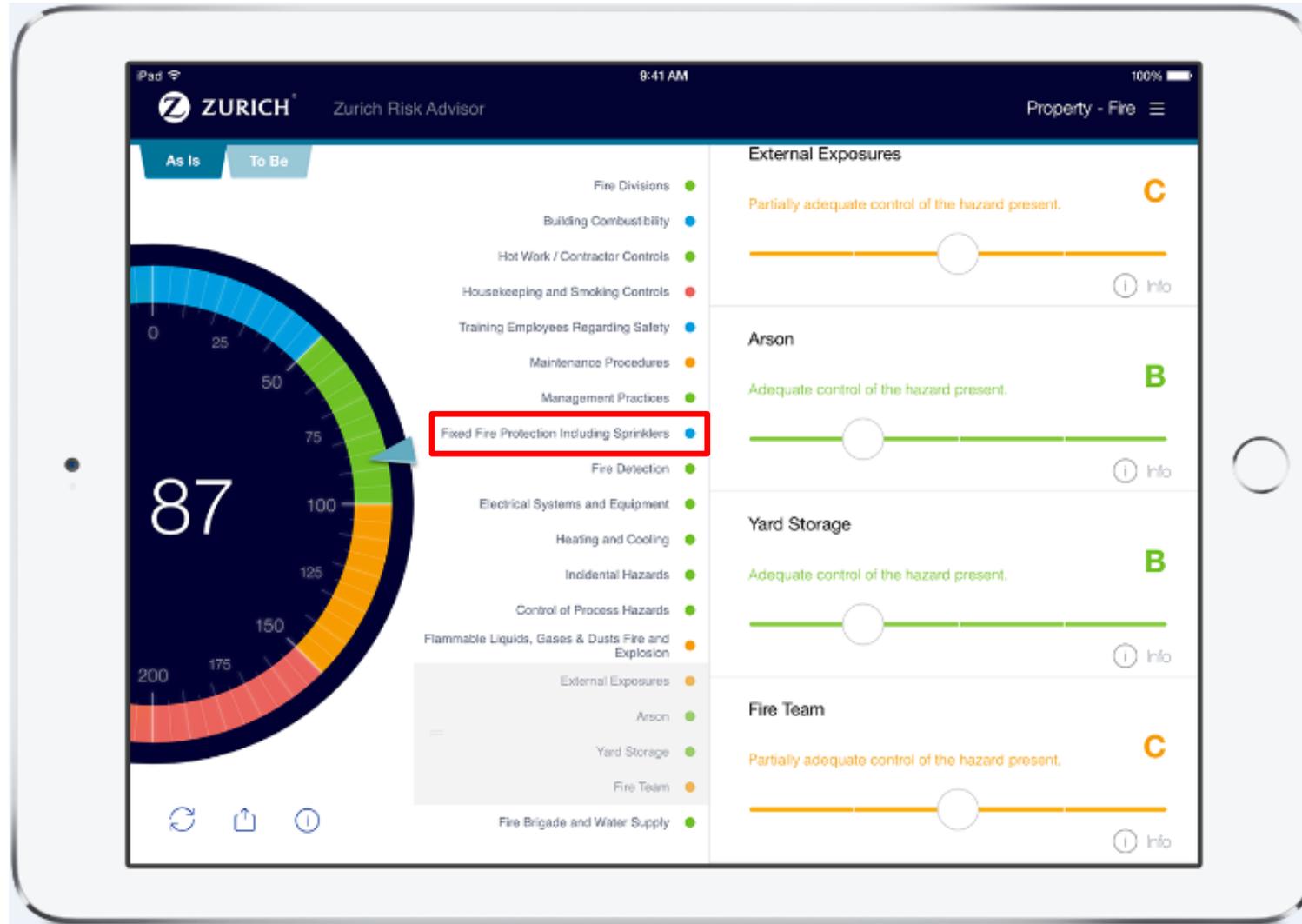
To assess risk quality

## Risk improvement actions

To improve risk quality

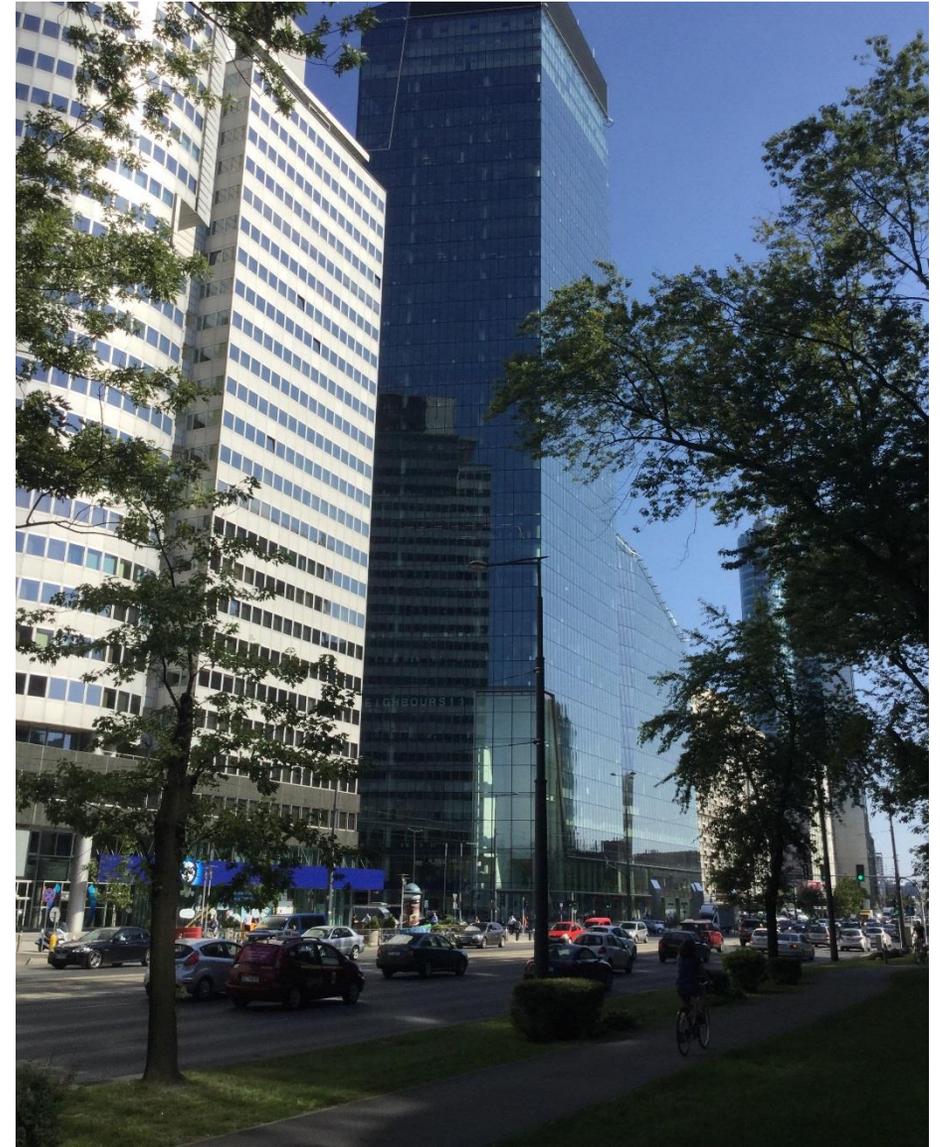


# Zurich Risk Grading



# Managing insurance risk in high-rise buildings

- Value engineering and fire engineering
- Important insurance considerations are being overlooked
- The pace of build and style of some of these new high-rise developments is pushing the boundaries of our knowledge in terms of risk management
- Fire risks may be increasing with the use of combustible modern construction materials and methods
- Zurich can offer risk management guidance on combustible materials

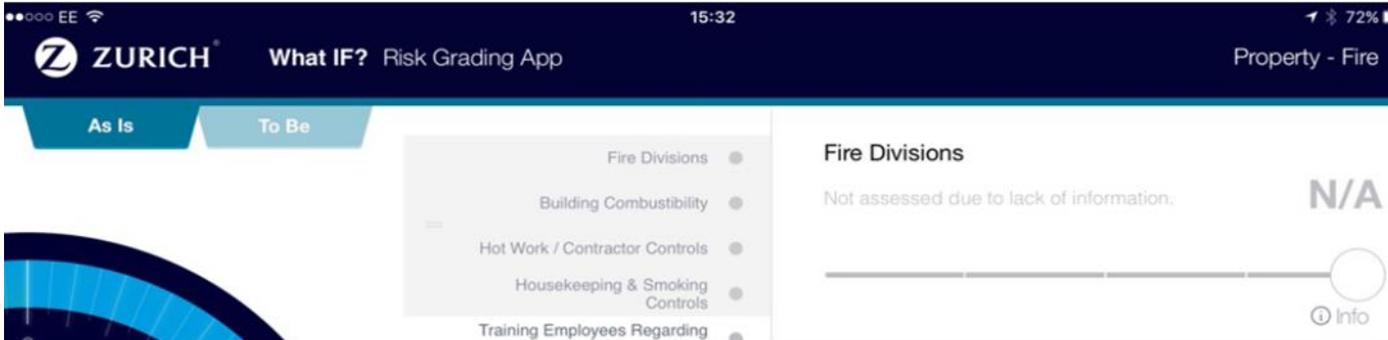


# Typical water mist challenges

- Not a property protection system
- Immature industry
- Partial protection
- Lack of suitable fire test data
- Focus ONLY on life safety
- Non listed components
- Lack of competency of installers
- Lack of project management
- Multiple system failures
- Incompetent AHJ's

# Property Assessment (Fire) - Risk Grading

Free App – Zurich Risk Advisor



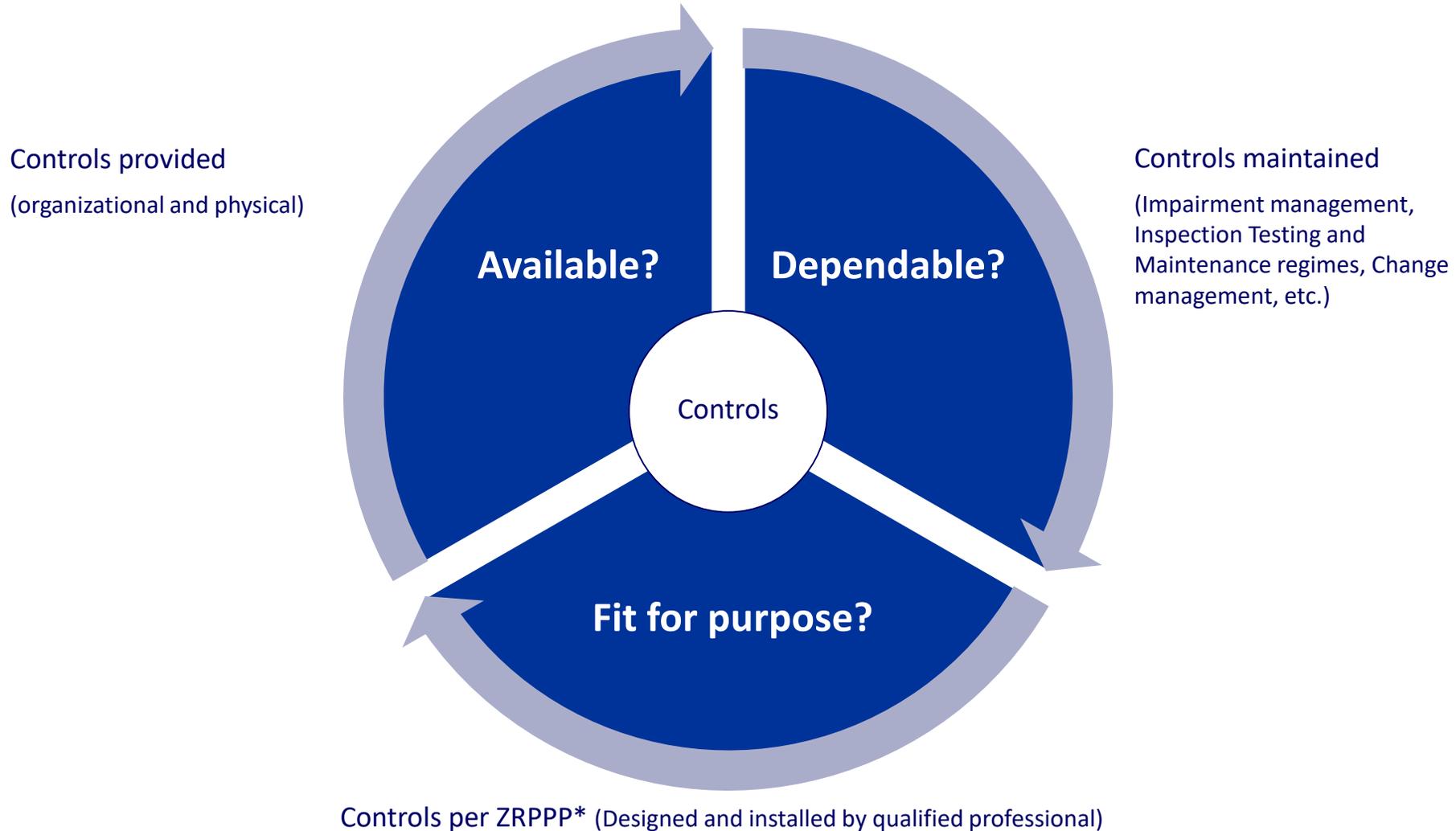
Date of Assessment: 3 Feb 2015  
Assessed by:

**RISK GRADING: PROPERTY - FIRE (JUL 11)**

Risk Factor	As Is	To Be	As Is	To Be
Fire Divisions	B	B	N/A	
Building Combustibility	B	B	A	
Hot Work / Contractor Controls	D	B	B	
Housekeeping and Smoking Controls	C	B	B	
Training Employees Regarding Safety	D	B	C	
Maintenance Procedures	B	B	D	
Management Practices	C	B		
Fixed Fire Protection Including Sprinklers	C	C		
Fire Detection	D	B		
			<b>217</b>	<b>135</b>

# Controls - Evaluation of customer resilience

Available controls v required controls

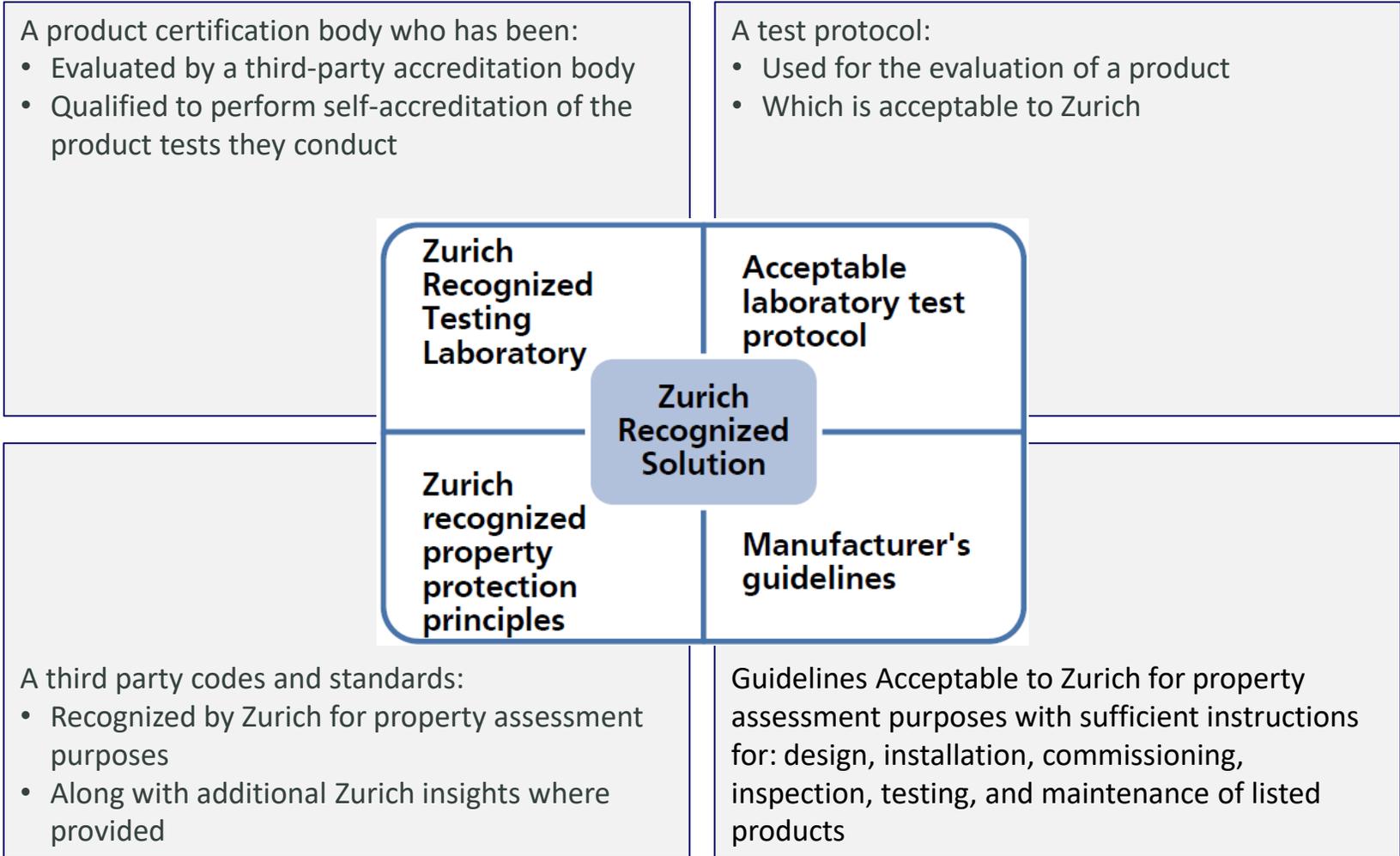


**1.1\* Scope.** This standard contains the minimum requirements for the design, installation, maintenance, and testing of water mist fire protection systems. This standard does not provide definitive fire performance criteria, nor does it offer specific guidance on how to design a system to control, suppress, or extinguish a fire. Reliance is placed on the procurement and installation of listed water mist equipment or systems that have demonstrated performance in fire tests as part of a listing process.



# Zurich Recognised Technology

The terms approved, certified, and listed are used interchangeably

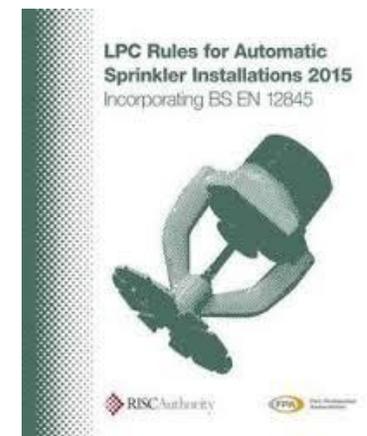


What does Zurich advise ?

1. Install sprinklers to a Zurich Recognised **Property Protection** Principle such as:  
NFPA13 or UK – LPC Rules Inc. BS EN12845\*

\* Water mist systems:-

- Discharge limited amounts of water for low fire loads only
- Have limited duration water supplies to aid escape of fire only – do not support extended events or fire service activity to enable final extinguishment
- Do not cover all areas of the buildings expected by property insurers



- Water mist is still a developing industry
- Zurich recognises automatic sprinklers in accordance with **LPC Rules for Automatic Sprinkler Installations Incorporating BS EN 12845 and Technical Bulletins** for property risk assessment purposes
- Zurich is an insurance company and not a regulatory authority

# Any questions

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