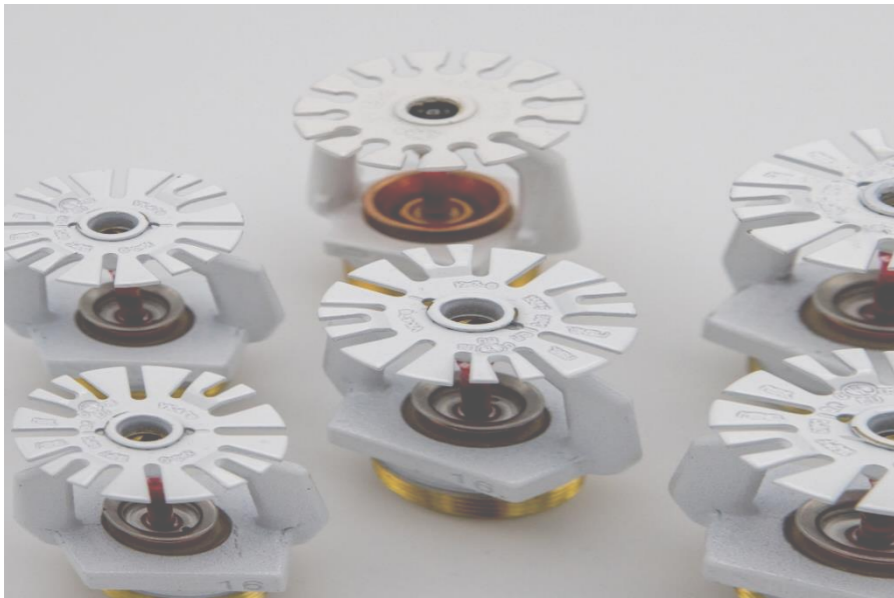


How equivalent solutions created the Dutch sprinkler market



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Agenda

1. Introduction
2. Dutch regulations and responsibility for Fire Safety
3. Equivalent solution with sprinklers
4. Development of the sprinkler market
5. Added value of sprinklers
6. Future
7. Questions?

QUALM
BLUSSYSTEMEN LEIDINGWERK GWW


Kuijpers
Brandbeveiliging


WB Firepacks
Our Power | Your Safety

VIKING[®]

Reliable[®]

Johnson Controls



HUYG bv
Alles voor het bevestigen van uw leidingen

aqua+
SPRINKLERSYSTEMEN


EQUANS
EMPOWERING TRANSITIONS

DE GROOT
INSTALLATIEGROEP 

victaulic[®]


SPIE

Cegelec

Fire Solutions

unica
fire safety


Verenigde Sprinkler Industrie
onderdeel van Federatie Veilig Nederland

WB
WARMTEBOUW


croonwolter&dros | TBI


PYROCK

u/c *Installatietechniek*


ominio
HANDEL + BEWERKING VAN BUIS EN FITTING


BOELE FIRE PROTECTION


ODS
klöckner & co multi metal distribution

Dutch Building code “Bouwbesluit 2012”

- ❑ Owner/user is **responsible** for Fire Safety!
- ❑ Regulations are limited: 1) escape safety 2) adjacent buildings will not be affected
- ❑ Based on passive fire safety measurements
- ❑ Maximum fire compartment size 1.000 m² or 2.500 m²
- ❑ Includes an ‘**equivalent article**’
- ❑ *Replaced by ‘BBL’ January 2024*



Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

Bouwbesluit Online 2012

Home Onderwerpen Handleiding Zoeken

Home > Bouwbesluit 2012 > Hoofdstuk 1. Algemene bepalingen > § 1.1. Algemeen > Artikel 1.3. Gelijkwaardigheidsbepaling

Artikel 1.3. Gelijkwaardigheidsbepaling

> Naar Nota van toelichting

1.

Aan een in hoofdstuk 2 tot en met 7 gesteld voorschrift hoeft niet te worden voldaan indien het bouwwerk of het gebruik daarvan anders dan door toepassing van het desbetreffende voorschrift ten minste dezelfde mate van veiligheid, bescherming van de gezondheid, bruikbaarheid, energiezuinigheid en bescherming van het milieu biedt als is beoogd met de in die hoofdstukken gestelde voorschriften.

2.

Aan het in [artikel 8.2, tweede lid](#), gesteld voorschrift hoeft niet te worden voldaan indien de bouw- en sloopwerkzaamheden anders dan door toepassing

Type

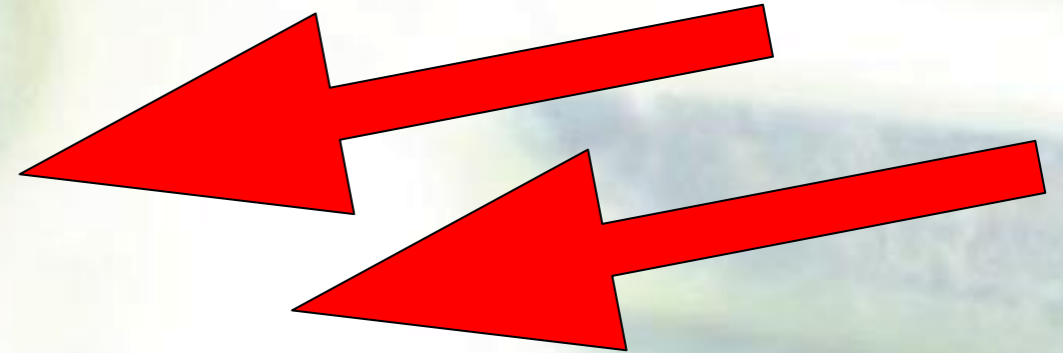
- Nieuwbouw
- Bestaande bouw
- Verbouw (geheel)
- Verbouw (gedeeltelijk)
- Tijdelijke bouw

Gebruiksfuncties

- Woonfunctie
- Bijeenkomstfunctie
- Celfunctie
- Gezondheidszorgfunctie
- Industriefunctie
- Kantoorfunctie

Cause of fire safety problems

- ❑ Laws and regulations are not understood
 - > clients do not set any requirements for fire safety
- ❑ Construction process is complicated
 - > clients relinquish control of (re)construction
 - > insufficient coherence of measures
- ❑ Opportunistic about effectiveness of (internal) emergency services
 - > ignoring risks and shorter survival time
- ❑ Fire safety is regarded as costs
 - > no measures for damage limitation, continuity, liability and reputational damage
- ❑ Increasing fire risk and faster fires
 - > increasing risks and shorter survival time are ignored



Dutch Building code is about escape safety

comply with
regulations



Fire safety is a choice!

What consequences of a fire do you accept? and which ones do you not accept ?



Know the difference between:

Public goals: almost limited to **escape safety**

Private goals: **reduction damage, Business continuity, sustainability**


Building regulations

If you strive to meet the minimum requirements, it will by definition result in a building with a fire safety level that is too low!

Equivalent solutions with sprinklers



Equivalent solutions in the Netherlands

Comply with **MINIMUM** performance requirements of the building code using sprinklers based on **equivalent article 1.3**

Knowledge about the sprinkler concept is important:

Stakeholders in Fire Safety and their knowledge

- Owner/user responsible **open for real Fire Safety**
- Consultant **'advises' the owner with advice**
- Authority having jurisdiction > local government **accepting the solution!**
- Fire Service **advises for AHJ**
- Insurer **acceptance of the residual risk**

Acceptance of sprinklers

1. Direct obligation from legislation and regulations
2. Assign standards with sprinkler to meet the performance requirements
3. Equivalent solutions using sprinkler in standards
4. Equivalent solutions using guidelines
5. Equivalent solutions using publications, investigations etc



Acceptance of sprinklers; current situation (1)

1. Legal requirement for sprinklers in parking garages under certain sleeping functions. From January 1, 2024
2. Legal obligation for sprinklers or alternative measure to reduce the risks of the storage of hazardous substances
 - > Publication Hazardous Substances PGS14, PGS15, PGS37
3. Legal obligation for sprinklers to reduce the risks of fireworks storage /sales areas > Fireworks Decree and Technical Bulletin 60A 'regulations for fireworks storage'
4. Equivalent solution for buildings higher and lower than Building Code limits; higher than 70 m or lower than 8 m below the measurement level
 - > High-rise building: guideline SBR-Curnet
5. Equivalent solution for enlarging fire compartments
 - > NEN 6060, NEN 6079,
 - > *from January 1, 2024 for most building types direct acceptance*

Acceptance of sprinklers; current situation (2)

6. Equivalent solution for extending the escape route length
> for instance report fires safety for personal safety (TU/e)
7. Equivalent solution for allowing lower structural fire safety of a building
> Guideline 'Sprinkler installations and fire resistance to collapse of steel structures' (DGMR/Efectis)
8. Equivalent solution for maintaining the function of the transmission path of fire alarm and evacuation systems > NPR 2576
9. Equivalent solution for fire resistance (internal and external fire spread)
10. Equivalent solution for limiting the number of evacuation assistance 'Building Code 2012 article 7.11A'
> official explanation Building code
11. Compensatory measurements for object protection and facades
> Exposure protection Technical Bulletin 65A, BBL measures

Acceptance of sprinklers; current situation (3)

12. Applying 'Stay in place' strategy

> situations where evacuation is not desirable or not possible

13. Measurements for increasing the chance to escape (escape safety)

> limited mobility, increasing the chance of escape, official duty of care, etc.

14. Protection of tunnel structures and personal safety of tunnel users

15. Improving fire safety in complex structures

> compensation fire safety of existing buildings, old complex infrastructure in old cities, etc.

16. Support fire brigade deployment

> turn-out time and deployment strategy

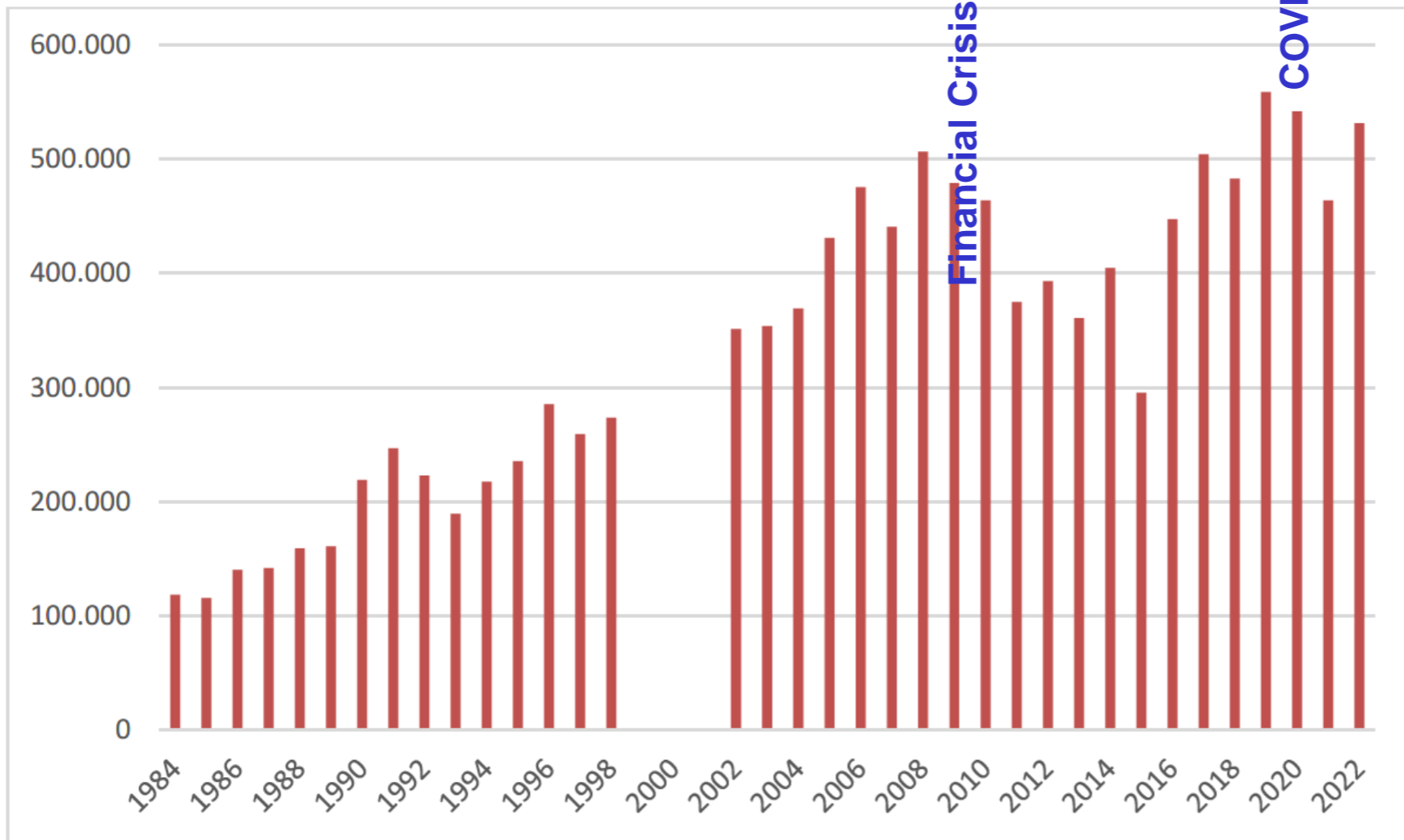
17. Measurements for accepting more and larger residential apartment in apartment block with one escape route

18. Measurements for accepting not having a 2nd escape route or creating an extra protected escape route

Development of the sprinkler market



Dutch market Growth (source CIBV*)



1: data not complete: companies missing
2: only registration of certification

Development of the sprinkler market

Country Manager Netherlands main activities:

1. Promotion: developing and implementing specific projects and activities;
2. Knowledge development: developing information and/or making it available on the basis of knowledge gaps and knowledge needs;
3. Public Relations: expanding the network and building partnerships, promoting mutual understanding between the sprinkler industry and stakeholders;
4. Service desk: representing the interests of the VSI members in Standard committees, supporting the section, VSI committees and working groups.



Development of the sprinkler market

Monitoring the market

1. Which developments and problems in the markets? Stakeholders roles?
2. How can sprinkler- or watermist solutions contribute? Trade-offs?
3. What is the government's and market policy, and how can we influence it?
4. What can we do to contribute to improve Fire Safety
5. Is it interesting for our members? Will the market invest?

Development process

- 1) Identification of a sprinkler application**
Writing, listening, talking, discussing
- 2) Influencing attitude and behavior with knowledge and cooperation**
Emphasis active extinguishing systems

Sharing knowledge






Added value of sprinklers






Development sprinkler market





1. Markts

-  Buildings higher than 13 meters (>70 meters is regulated)
-  Renovation
-  Offices at DCs, automatic warehouses... Logistic



2. Sprinklers for personal safety

-  Equivalence for smoking compartments
-  New fire safety concepts such as 'Stay in place'
-  Protection of vulnerable people

3. Effects of sustainability

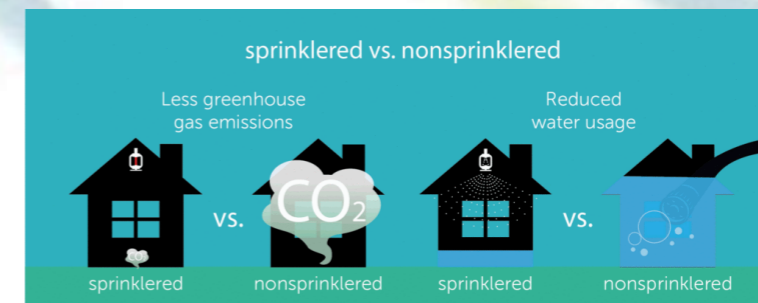
-  wooden buildings; compensation risks
-  remote servicing
-  circular construction; Building as a storage place for building materials
-  Less use of energy and water: Balance: Opportunities/threats?

4. Protection of environment

-  Opportunity: prevent negative impact fire on the environment
-  External safety measures (toxic cloud, fire, explosion)

Challenges

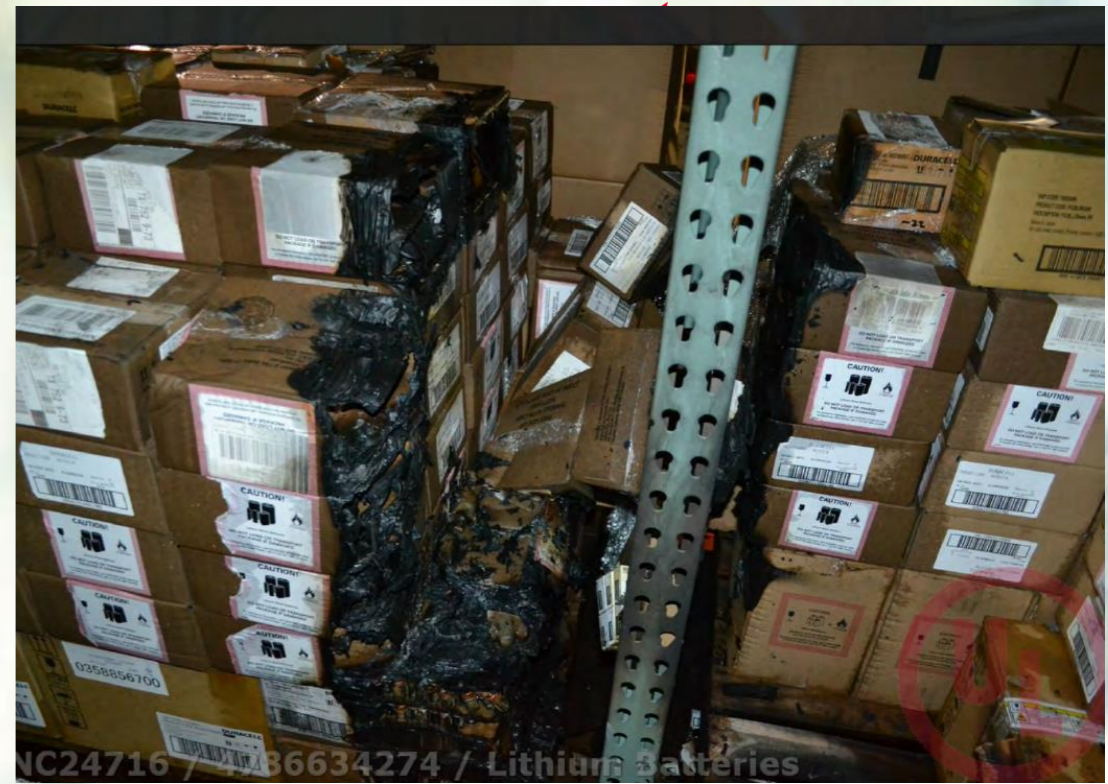
1. Knowledge development
 - > More cooperation, exchange knowledge
 - > attract people for the industry / knowledge
 - > correct Programs of Requirements
2. Encourage owners/users and developers to be rewarded for doing more than the legislation requires
3. Low safety level of Dutch building code....
4. Keep them an economic option
5. Imago: sprinklers als 'must have', not as a necessary evil
6. ...



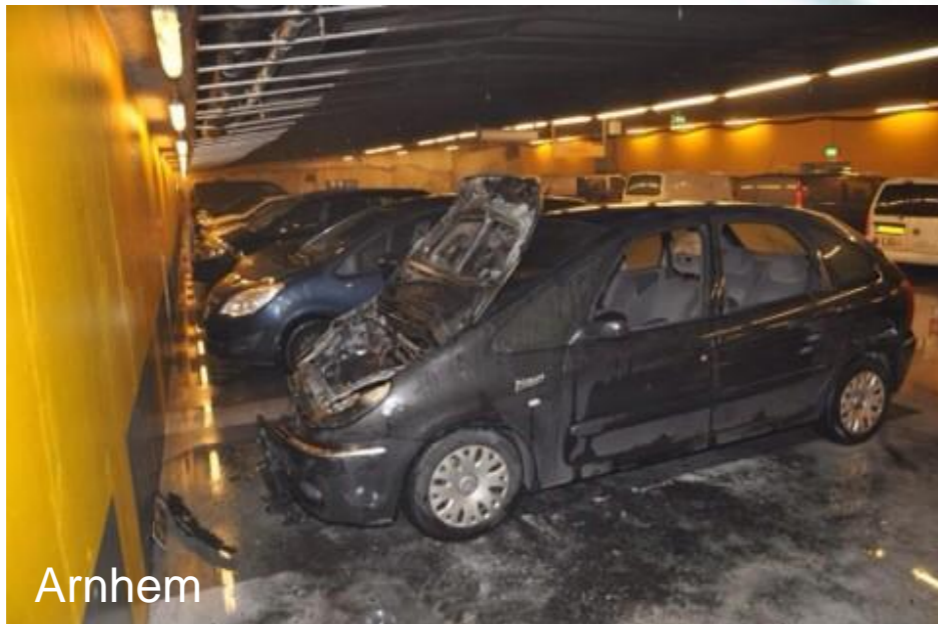


Leidschendam

3 sprinklers extinguish fire in huge shopping mall



Fire Lithium-ion storage automatic extinguished



Arnhem

1 sprinkler controls the fire



Zoeterwoude

sprinklers control recycling





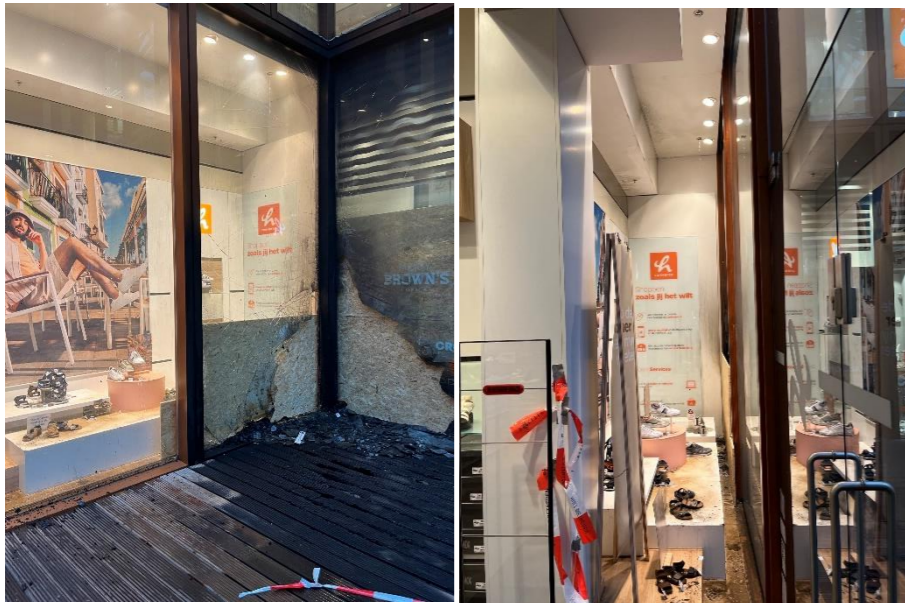
Oss

1 sprinkler extinguish fire supermarket



Rotterdam

2 sprinklers extinguish fire appartement



1 sprinkler extinguish fire shop 15 may 2023



Venray

sprinklers extinguish wood factory



ede

112Nijkerk.nl

2 sprinklers control fire café



1 sprinkler extinguish fire DC



Den Haag

1 sprinkler extinguish fire



Arnhem

1 sprinkler extinguish fire shop

Thank you!



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