

calculate sheet volume for contaminated extinguishing water (VdS 2557a_en)

Annex to Guidelines for Loss Prevention by the German Insurers

"Planning and Installation of Facilities for Retention of Extinguishing Water" (VdS 2557en)



Date

Object

Company

Street ZIP Code City

Name of the calculation area

Fire compartment area

Building/usage

Structural boundary conditions

Fire compartment area A_B m^2

Number of floors

Actual fire compartment area A_{tat} m^2

Fire load (select an option)

Determined fire load kWh/m^2

Determination of the fire load

Factor of utilisation of space (RAF)

Percentage of combustible matters (ABS)

Calculated fire load kWh/m^2

Overall fire load approach

Quantity of all liquids with and without water hazard potential

Quantity of liquids M m^3 bzw. t

Fire protection

Fire Protection concept

Retention volume for contaminated extinguishing water V

$$V = \left\{ \left(A_{tat} \times \frac{SWL}{0,24} \times BAF \times BBF \right) + M \right\} / BSF$$

$$V = \quad m^3$$

Legend

V [m^3]	calculated retention volume for contaminated extinguishing water	BBF	factor of fire load (dimensionless)
A_{tat} [m^2]	actual fire compartment area	M [m^3]	quantity of all liquids for production, operation, and storage w or w/o WGK class in the respective fire compartment
SWL [m^3/m^2]	specific water output	BSF	factor of fire protection (dimensionless)
BAF	factor of fire compartment area (dimensionless)		

Disclaimer:

The author reserves the right not to be responsible for the topicality, correctness, completeness or quality of the information provided and the values ascertained.

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