

Basic formulas (Grundformeln)

$$S * F = (G + k_1) * (B / k_2)$$

$$B = Q * C * R * K * A * P * E * H$$

- S fire precautions
value of the safety devices for protection against fire
(Schutzwert der Brandschutzeinrichtungen)
- F structural fire protection
of the load bearing and room closing components
(Brandwiderstand der tragenden und raumabschließenden Bauteile)
- G geometry of the fire compartment
(Geometrie des Brandabschnittes)
- k1 constant
k2 constant
- B specific fire hazard
(Spezifische Brandgefahr)
- Q fire load per area
(Brandbelastung)
- C fire hazard of the components in the room
(Brandgefährlichkeit)
- R danger of smoke logging
(Verrauchungsgefahr)
- K danger of corrosion
(Korrosionsgefahr)
- A activation danger
(Aktivierungsgefahr)
- P danger of life
(Personengefährdung)
- E activity of fire service personnel at the scene
of fire or accident
(Einsatzfaktor der öffentlichen Feuerwehr)
- H height of the building
(Gebäudehöhe)

RECHNERISCHER NACHWEIS DER BRANDSCHUTZEINRICHTUNGEN RECHENBLATT		
Betrieb: EKZ (Lecture "Protective ecology") Objekt: Shopping-Center Brandabschnitt: Sales area		
Geometry of Fire compartment area G		
Fire compartment area	accessibility	G
Length = 80,0 m	. b = 60 m = 288000 =	2,88 .10E5
Width = 60,0 m (b)	no accessibility	G'
Area = 4.800 m ²	G.1,5 = G' = 0 =	0,00 .10E5
Specific fire hazard B		
Immobile fire load / m ² :	0	Bautyp: 5
Mobile fire load / m ² :	400 1,20	
Components fire hazard:	1,20	
Smoke danger:	1,00	
Corrosions danger:	1,20	
Activation danger:	1,00	
Danger of life:	1,30	
Fire service personnel:	6 1,14	
Height of the building:	6,0 1,00	
Specific fire hazard:	B = 2,56	
Smoke exhaust venting:	1 available = BRE	
Calculation factors S . F		
	S . F = 2,99 (without BRE)	
	S . F = 2,74 (with BRE)	
Safety devices for protection against fire		
at fire resistance class		
R 00: S1+S5		
R 30: S5		
R 60: S4		
R 90: S3		
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