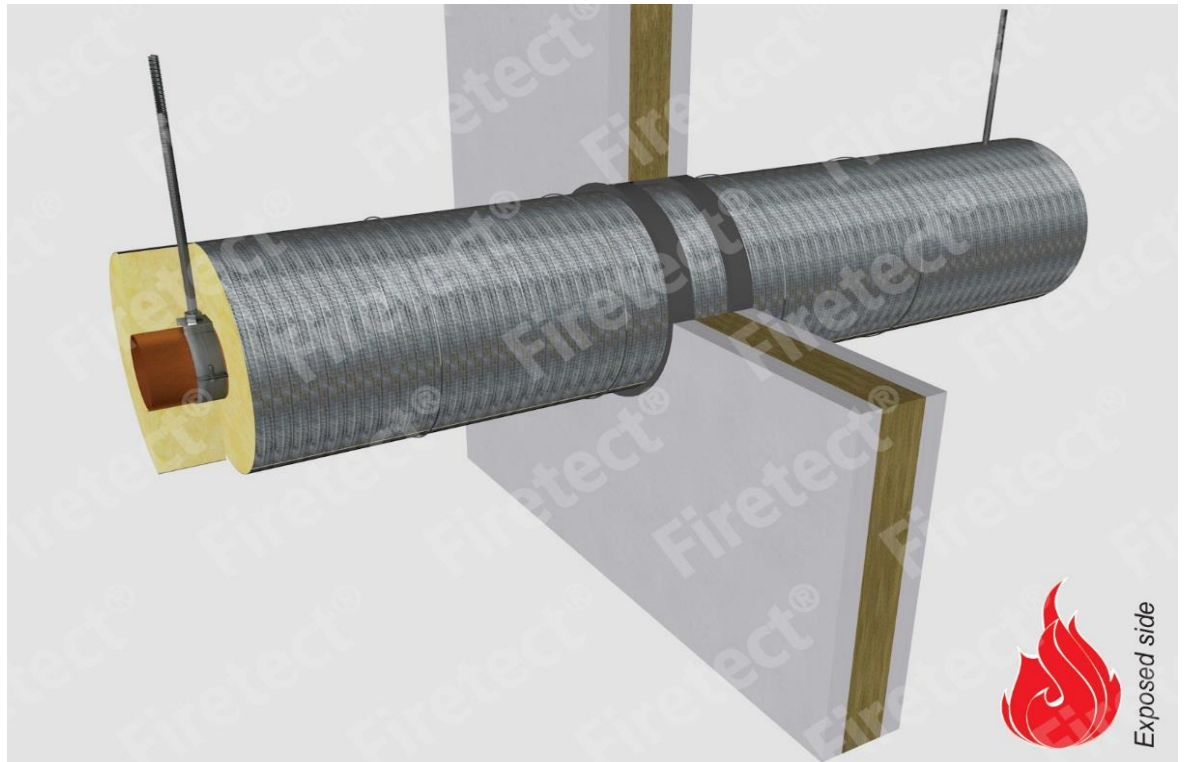


tested property  
test method  
service no.

fire resistance  
EN 1366-3  
21-7



## copper pipes

### Graphite sealant

service type <sup>1)</sup> dØ (mm)	pipe insulation <sup>2)</sup> s1 (mm)	min. 75 kg/m <sup>3</sup> eg Climpipe, Rockwool or U Protect Pipe Section Alu2	EI	constructive element <sup>3)</sup>	Firetect joint seal		application	backing required	max. opening in construction	pipe end configuration	max. angle	
					width	depth						
Ø15	1,0	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	75 mm	C/U + U/C + C/C	perpendicular + all angles between 90° and 45°
			1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	85 mm	U/C + C/C	
	30mm	1200 CS + CI	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	95 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	105 mm	U/C + C/C	
	40mm	1200 CS + CI	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	115 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	125 mm	U/C + C/C	
	50mm	1200 CS + CI	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	135 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	145 mm	U/C + C/C	
60mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	165 mm	U/C + C/C			
80mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	205 mm	U/C + C/C			
<b>max.</b>												
Ø76	2,1	glass / rock wool 20mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	136 mm	C/U + U/C + C/C	perpendicular + all angles between 90° and 45°
			1200 CS + CI	EI 90	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	150 mm	U/C + C/C	
	30mm	1200 CS + CI	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	156 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 90	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	166 mm	U/C + C/C	
	40mm	1200 CS + CI	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	176 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 90	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	186 mm	U/C + C/C	
	50mm	1200 CS + CI	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	196 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 90	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	206 mm	U/C + C/C	
	60mm	1200 CS + CI	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	216 mm	C/U + U/C + C/C	
			1200 CS + CI	EI 90	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	226 mm	U/C + C/C	
	80mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	10 mm	25 mm	2 sides	-	256 mm	C/U + U/C + C/C		
	80mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	15 mm	25 mm	2 sides	-	266 mm	U/C + C/C		

<sup>1)</sup> Penetration services must be supported; support distance ≤ 500mm.

<sup>2)</sup> Pipe insulation must be fastened individually (not wrapped!) with steel wire; at max. 50mm + 300mm from constructive element.

<sup>3)</sup> Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. EI for flexible walls ≥ 100mm is also applicable for rigid walls ≥ 100mm!