

Technical Data Sheet

Impact sound products

Acoustic decoupling between stair flight and stair landing

Egcoscal stair beddings

The Egcoscal building acoustics system decouples the prefabricated stair flight from the landing over the entire surface and demonstrably reduces impact sound transmission. In addition to sound insulation in the area of the concrete stairs, the Egcoscal system also supports positional stability in the stair flight connection. The matching spacer plates protect the joints from dirt and reduce sound transmission to the staircase wall.

Egcostep[®] stair flight decoupling

Safe load transfer and high requirements for sound insulation are the challenges when installing concrete stairs. Egcostep[®] acoustically separates the flight of stairs from the landing and reduces impact sound transmission in the stairwell.

Acoustic decoupling of stair landings

Egcopal impact sound insulated shear force dowel

The requirements for sound insulation in buildings have been increasing for years. To meet the requirements, impact sound insulation of stairs and stair landings must be certified. The impact noise insulated Egcopal shear force connector reduces impact sound by decoupling components. It is used for the bedding of stair landings, arcades and cantilever balconies and transmits the shear forces acting in the connection joint. At the same time, the acoustically decoupled bedding ensures that the transmission of irritating noises into adjacent rooms is insulated – this increases the comfort and well-being of the residents.

Egcosono stair landing bearing

The requirements for sound insulation in buildings are regulated in country-specific sound insulation standards. The Egcosono landing support effectively reduces unwanted impact sound transmission in the stairwell by acoustically decoupling the landing, supporting it and consistently separating it from other building components.

MAX FRANK impact sound products overview

Product overview for MAX FRANK impact sound products (as of March 6, 2024)

	MAX FRANK	Fire protection	Load bearing capacity	weighted impact sound pressure level difference of staircase or stair landing according DIN 7396	
				MAX FRANK up to ΔL^*_w	MAX FRANK up to $\Delta L^*_{n,w}$
Acoustic decoupling between stair flight and stair landing	Egcoscal SP S-Form Elastomer with DIBt approval	F90	43 kN/m	27 dB	29 dB
			61 kN/m	27 dB	28 dB
			85 kN/m	27 dB	28 dB
	Egcoscal SP F-Form Elastomer with DIBt approval	B2	43 kN/m	27 dB	29 dB
			61 kN/m	27 dB	28 dB
			85 kN/m	24 dB	25 dB
	Egcostep® SP	R90	Type SP S2 $V_{Rd} = 17.4$ kN/Element $H_{Rd} = 2.0$ kN/Element	24 dB*	26 dB*
			Type SP S4 $V_{Rd} = 34.8$ kN/Element $H_{Rd} = 4.0$ kN/Element	23 dB	25 dB
			Type SP S6 $V_{Rd} = 52.2$ kN/Element $H_{Rd} = 6.0$ kN/Element	22 dB	24 dB
			Type SP S7 $V_{Rd} = 60.9$ kN/Element $H_{Rd} = 7.0$ kN/Element	21 dB**	23 dB**
Type SP S8 $V_{Rd} = 69.6$ kN/Element $H_{Rd} = 8.0$ kN/Element			21 dB**	23 dB**	
Acoustic decoupling of stair landings	Egcopal SPX DIBt approval	F120	for extra high loads 60.4 kN up to 75.6 kN Depending on joint width z [mm]	29 dB	34 dB
	Egcopal SPH DIBt approval	F120	for high loads up to 37.3 kN	31 dB	34 dB
	Egcopal SP DIBt approval	F120	for normal loads 19.8 kN up to 37.3 kN Depending on joint width z [mm]	35 dB	34 dB
	Egcosono SP	R90	up to 87.4 kN	29 dB	30 dB

* Impact sound value is based on extrapolation of reference measurement of Egcostep® Typ SP S4

** Impact sound value is based on extrapolation of reference measurement of Egcostep® Typ SP S6

Disclaimer / Notes:

The usability of the products in the specific installation situation must be checked by the user. This data sheet is constantly updated. Technical changes are therefore expressly reserved without prior information of the customer. The currently valid version can be found on our website at: www.maxfrank.com. Our General Terms and Conditions of Sale apply in addition.

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