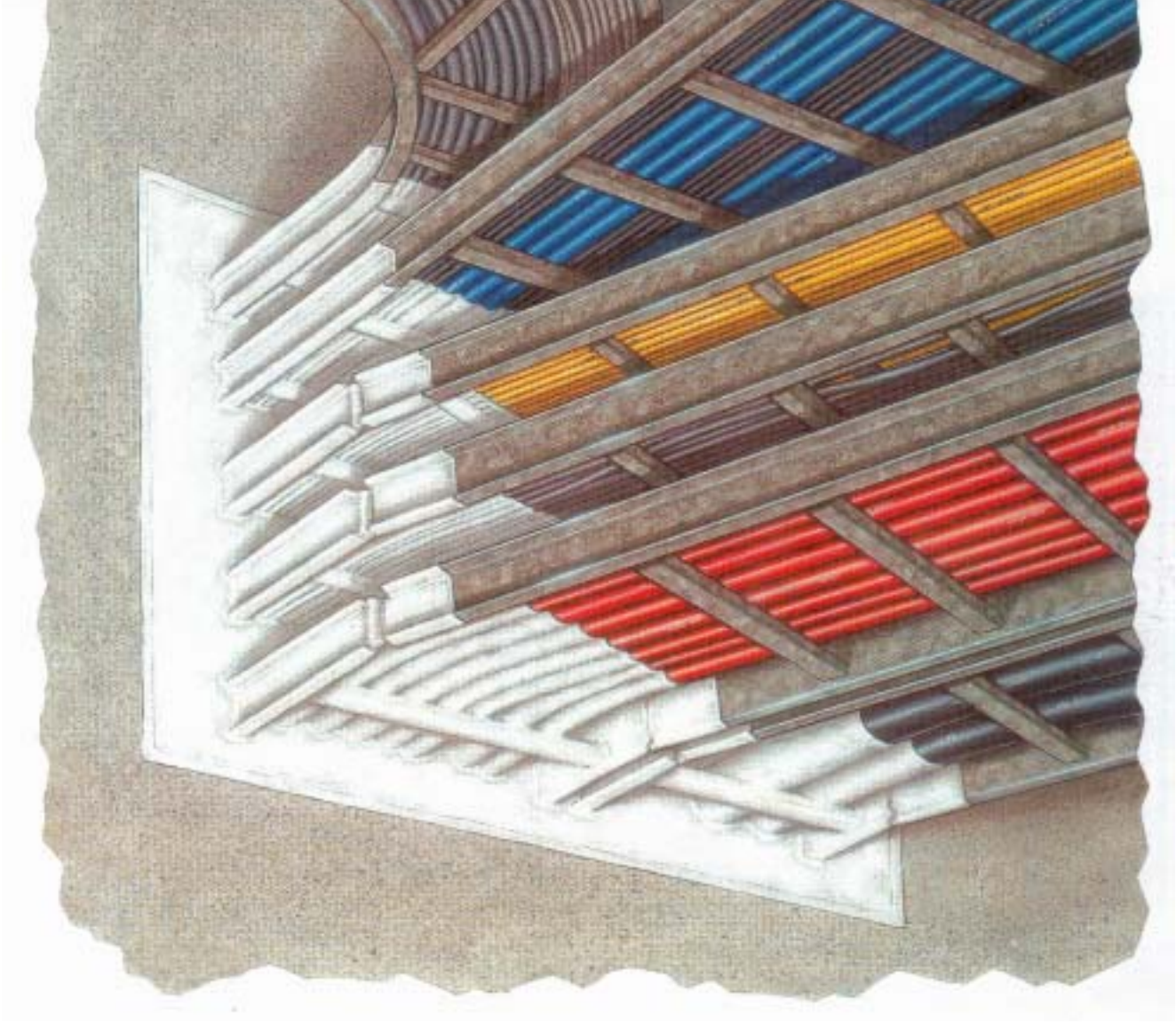

Panel Seal

Single and double panel
penetration seals for cables

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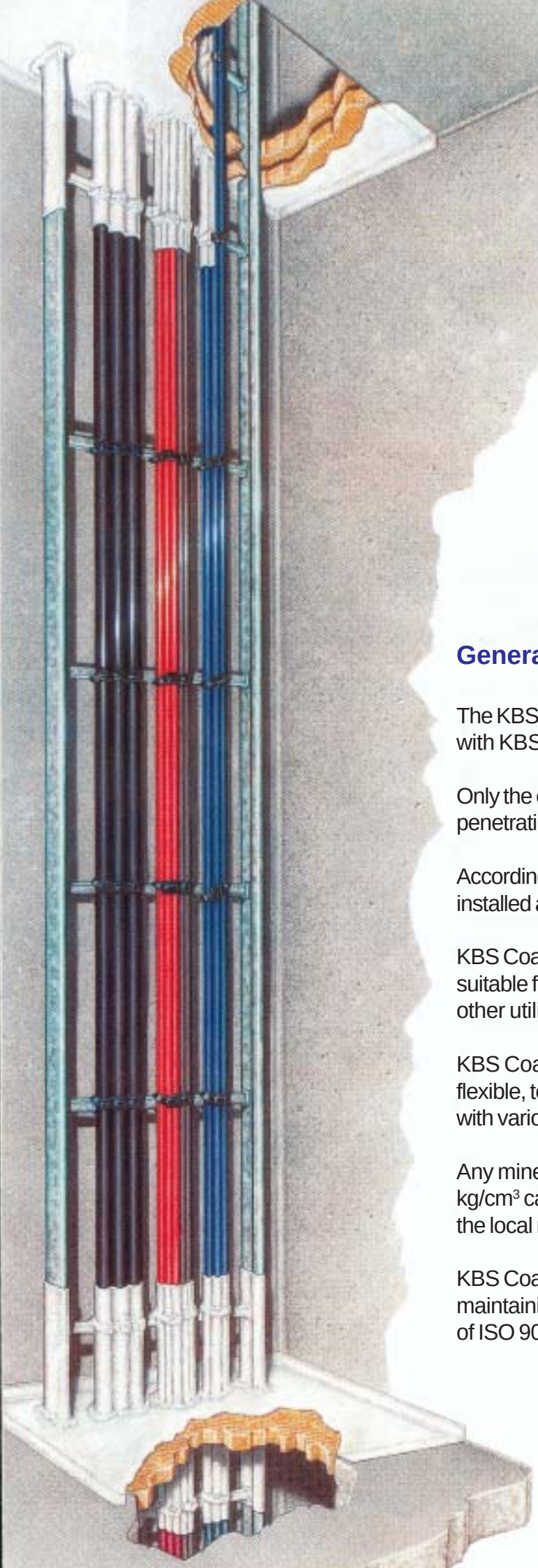


General Information

The KBS Panel Seal consists of mineral wool panels coated with KBS Coating.

Only the exposed side of the panels and the visible penetrating items have to be coated with KBS Coating.

According to the requirements KBS Panel Seal can be installed as a single or double panel seal.

KBS Coating is a waterbased ablative fire protective coating suitable for penetration seals and fire protection of cables or other utilities.

KBS Coating lasting for the lifetime of cables is highly flexible, totally weather- and water-resistant, and compatible with various chemicals.

Any mineral wool panels with a minimum density of 150 kg/cm^3 can be used for KBS Panel Seals. If nor available on the local market, they can be supplied by the distributor.

KBS Coating is produced only by Grünau Illertissen GmbH maintaining a quality system which fulfils the requirements of ISO 9001.

Technical Information

The KBS Panel Seal is used for the fire-resistant closing of any size of opening in walls or floors, providing a smoke- and gas-tight seal around all penetrating utilities such as cables, cable trays, pipes and ducts.

KBS Panel Seals have been tested and approved world-wide and have received various ratings depending on type and national standard. (Please see list of international test reports on back page.) Please note the following results:

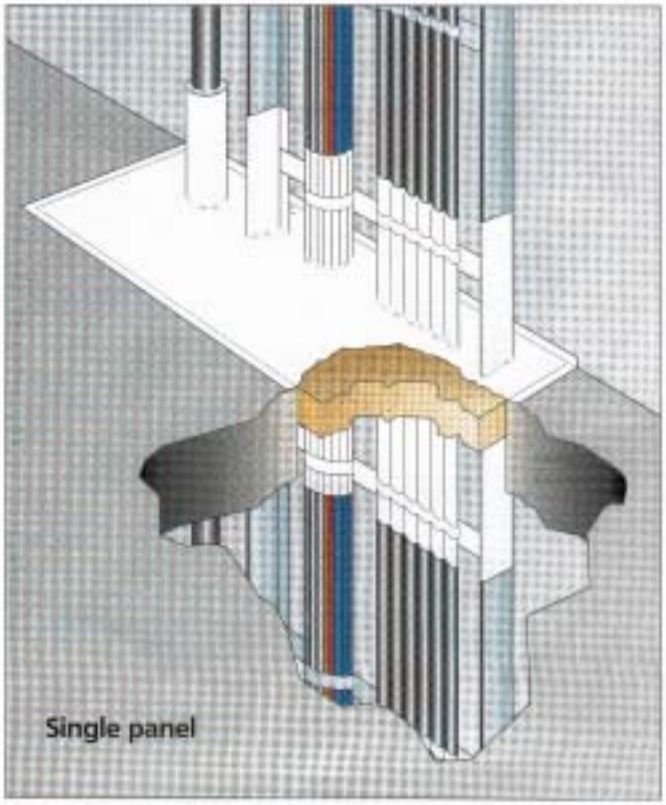
Single Panel Seal (panel thickness 50-60 mm): Rated up to 120 min.

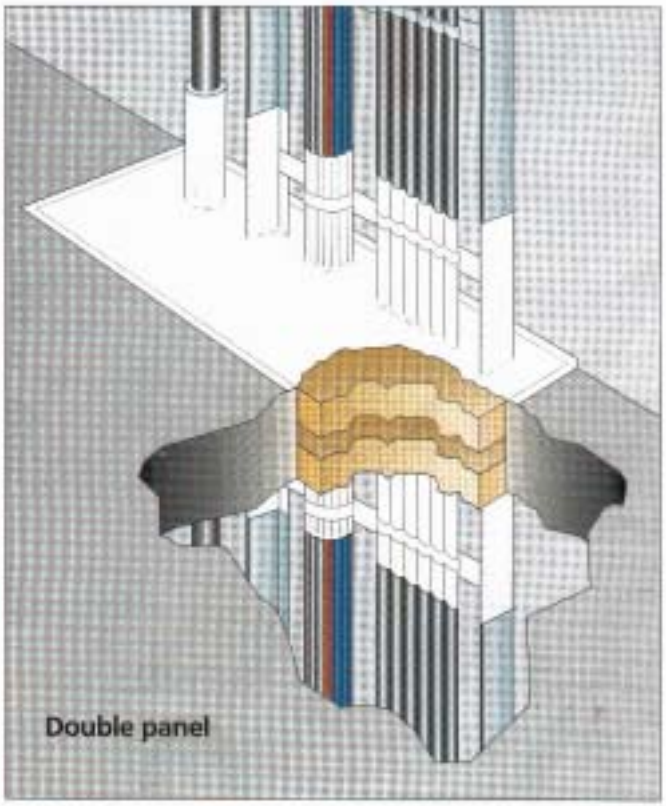
Double Panel Seal:
Rated up to 180 min.

Panels are coated with KBS Coating at a coverage of approx. 3 kg/m^2 on the exposed (visible) side only. This means that the same amount is used whether it is a single coating or a double panel seal. Panels may be coated by spray or trowel on site, or precoated. Precoated panels are also available from the distributor. In the double panel seal, there usually remains an air space between the two panels since each panel os installed flush with the outside of the wall.

In all KBS Panel Seals, only the exposed (visible) penetrating items (cables, pipes, etc) must be coated with KBS Coating for a distance away from the seal. This distance is specified in national tests and differs from country to country and according to requirements.

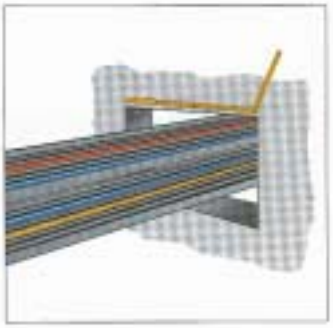
Retrofitting of additional utilities is achieved with ease in a KBS Panel Seal. The opening for the penetrating item is cut as accurately as possible with a pointed saw knife and sealed with KBS sealant after the installation of utilities. Where the opening has been cut larger than the penetrating item, loose mineral wool should be stuffed tightly in the remaining space before applying KBS Sealant.



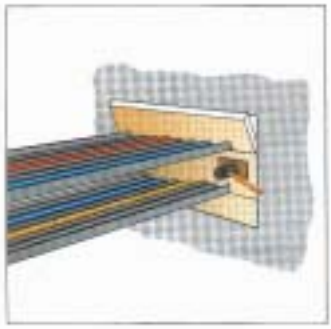


Installation Instructions

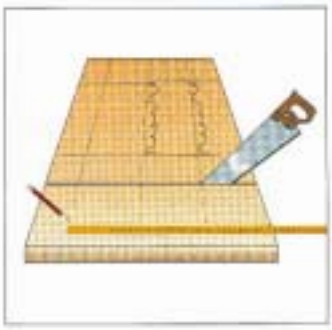
Measure the exact location of the cables and cable trays using a meter stick, a mason's compass or a piece of string with which you can locate cables by measuring from the upper corners.



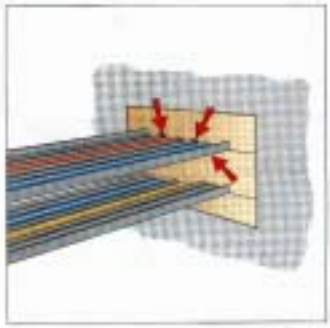
Place the lower edge of the panel first over the cables, and push slowly into the opening. Since the panel has been cut oversize, a piece of wood and a hammer will be necessary to get the panel in place. If the panel is loose in the opening, it should be discarded and replaced by a new one.



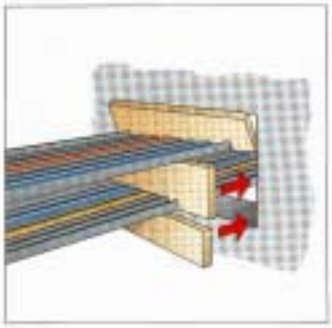
Transfer measurements onto mineral wool panel, but add about 3 mm on height and width of panel (this will result in a tighter fit). Now cut panel into as many pieces as necessary to fit in between the wall opening and cable trays as well as between cable trays.



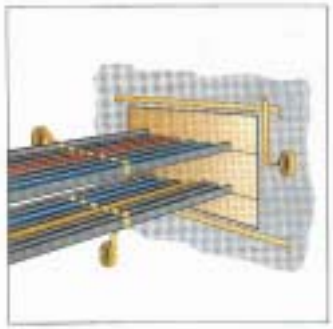
After the panel is in plac,e check carefully for possible openings, stuffing them with loose mineral wool. Apply KBS Coating or KBS Sealant covering carefully spots stuffed with loose wool. Also use KBS Coating or KBS Sealant liberally between cables and other spots, which may allow leakage of fumes and smoke.



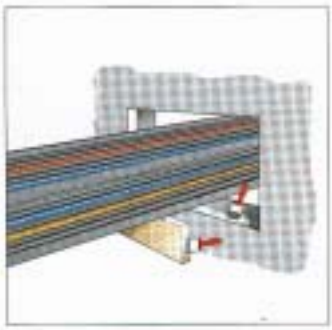
Check cut by placing panels over cables and make necessary corrections.



Use masking tape to keep cables and surrounding area on wall or ceiling clean.

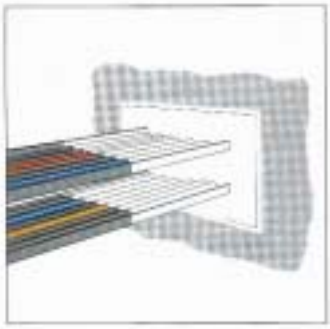


Apply KBS Coating to the edges of the panels as well as to the insides of the opening where panels will be fitted. Prior to coating application, the surface of the wall should be wetted with water.



Now apply KBS Coating by spray or brush, first to panels, then to distance required by national standards. Coat wall about 2 cm over edge of opening.

Attention: If walking on a floor penetration is inevitable, apply a suitable cover.



Panel Seal

Selection of International Test Results and Approvals

Country	Ceiling or wall test	KBS Penetration Method	size of Penetration	official fire resistance rating F/T**	Standard
Australia	wall	single panel	400x400	120 F	AS1530 p4
	floor	single panel	600x600	120 F	
Australia	wall	double panel	600x600	180 F	AS1530 p4
	floor	double panel	600x600	180 F	
Austria	floor	single panel	600x600	60 F	ONORM B3800
	wall	double panel	1080x1110	90 F	ONORM B3800
Belgium	wall	double panel	1500x1500	180 F	NBN 713020
France	steel BH	single panel	150x300	60 F	A163OMCI
	floor	double panel	600x300	120 F	Arrete Ministeriel
Germany	wall	double panel	3000x1250	90 F	DIN4102
	wall Plaster	double panel	1200x1000	90 F	DIN4102
	floor	double panel	1000x Infinate	90 F	DIN4102
Great Britain	wall/floor	single panel	250x250	90 F	BS476 p. 8
	wall/floor	double panel	400x400	180 F	BS476 p. 8
Italy	wall	single panel	400x300	120 F	CM91
	wall	double panel	400x300	180 F	CM91
Netherlands	wall/floor	double panel	400x400	120 F	NEN 3884 (ISO 834)
Singapore	wall/floor	double panel	400x400	180 F	BS476 p. 20
South Africa	wall	double panel	600x600	120 F	SABS0177 p2
Sweden	wall/floor	single panel	not limited	60 F	NT-FIRE 005
	wall/floor	double panel	not limited	120 F	NT-FIRE 005
Switzerland	floor	double panel	not limited	90 F	VKF, AEAI
	wall	single panel	not limited	30 F	VKF, AEAI
	floor	single panel	not limited	30 F	VKF, AEAI
	wall	single panel	not limited	60 F	VKF, AEAI
	floor	single panel	not limited	60F	VKF, AEAI
USA	wall	double panel	600x600	120 F	ASTME814
	floor	double panel	600x600	120 T	ASTME814
USA	wall	double panel	600x600	120 F	FM4990
	floor	double panel	600x600	120 T	FM4990

The above data, particularly the recommendations for the application and use of our products are based on our knowledge and experience. Due to different materials and conditions of application, which are beyond our control, we recommend in any case to carry out sufficient tests in order to ensure that our products are suitable for the intended processes and applications. Therefore, any liability for such recommendations or any oral advice is expressly excluded unless we have acted wilfully or by gross negligence.