

# KBS® Sealbags

Expanding pillows  
for penetration seals

 **BASF**

The Chemical Company



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## Expanding pillows for penetration seals

### General Information

**KBS® Sealbags** are installed in cable penetration seals, where frequent retrofitting of new cables is expected or where dustfree penetration seals are requested, e.g. telephone exchanges, pilot plants, computer rooms, etc.

**KBS® Sealbags** are pillows consisting of tightly woven, durable fibre-glass cloth, filled with a combination of mineral fibres, incombustible components, water-insoluble expansion agents and special fire retardant additives.

**KBS® Sealbags** are totally water- and weather-resistant and retain their properties and effectiveness under all weather, temperature and atmospheric conditions.

**KBS® Sealbags** contain no asbestos or any other toxic substances.

**KBS® Sealbags** maintain their volume constancy. Even many years of industrial vibrations do not induce sagging of the bags, which results in an absolutely tight penetration seal (official report for 7 years vibration test available).

**KBS® Sealbags** are „dustproof“ for use in telephone exchanges, computer rooms etc.

**KBS® Sealbags** have a high electric resistance and are not current conductive, if kept in dry conditions.

**KBS® Sealbags** are easily installed and just as easily removed for retrofitting.

**KBS® Sealbags** are tested internationally (see list of test reports and approvals) with 18 cm and 34 cm sealing thickness providing up to 4 hours fire resistance. They are FM- and UL-listed.



## Special Features / Types

### How they react in fire:

- At approx. 130°C the various components of the bags start gluing up and sticking together, preventing the fillers from running out, even if the wrapping is damaged by mechanical impact.
- At approx. 280°C the content begins to expand up to 45%, so that even the smallest remaining spaces between cables, trays and masonry are tightly closed.



- At approx. 800°C a „ceramic reaction“ causes the content to harden and form a solid block. The seal becomes mechanically so strong that it will withstand mechanical damage caused by falling debris etc. or a hose stream from fire fighters.

### Used of KBS® Sealbags:

**KBS® Sealbags** are used to provide permanent or temporary fire stops for electrical cables. They are especially suited where frequent cable changes are expected and are also ideally suited to provide fire protection during the construction phase of a project.

**KBS® Sealbags** are used as well for sealing small PVC or steel pipes, ducts or cable conduits.

**KBS® Sealbags** provide smoke gas-tight penetration seals where cold smoke from a distant fire will not pass through and in case of a nearby fire any gaseous extinguishing agents (used in computer rooms etc.) will keep their extinguishing concentration.

**KBS® Sealbags** are ideal for the protection of cables in double floors of processing centres.

**KBS® Sealbags** may also be used to cover cables in trays against fire from sources such as welding.

**KBS® Sealbags** come in various sizes so as to allow the sealing of even the smallest openings.

### Available sizes

Standard types	Total weight in g (approx.)	Size in mm (approx.) Length x width x height (not padded)	Packaging Number of Bags per carton
<b>KBS® Sealbag 250</b>	250	340 x 180 x 13	20
<b>KBS® Sealbag 400</b>	400	340 x 180 x 18	35
<b>KBS® Sealbag 720</b>	720	340 x 180 x 35	20
<b>KBS® Sealbag 1500</b>	1500	340 x 330 x 35	10

## Installation

### Wall penetration

**KBS® Sealbags** should be patted by hand so that the content is distributed evenly before inserting them into the opening.

**KBS® Sealbags** should be placed into the opening by staggering the joints.

Use a smooth wooden stick to help push Sealbags in place.

### Floor and ceiling openings

A wire screen must be installed to the underside of the opening. The screen should be fastened to the ceiling using steel dowels and washers.



Place **KBS® Sealbags** lengthwise and flat onto the wire mesh, layer after layer. The filling of tight spaces is accomplished as described above.

If walking on the floor penetration seal becomes necessary, use any suitable cover.

For more details see our installation recommendations in each carton.

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.



## Selection of International Test Results and Approvals

Country	Testing Institute/ Approval Body	Ceiling or Wall Test	Sealbag Seal Thickness (mm)	Size of Opening (mm)	Hose-stream Test	Official Fire Resistance Rating (minutes)	Standard	Ref. No.
Europe	CSI	wall	340	1200 x 800	not required	up to EI 180	EN-1366-3	DC 02/017/F13
		floor	340	1200 x 800	not required	up to EI 180	EN-1366-3	
	AFITI LICCF	wall	180	800 x 600	not required	EI 120/E 180	EN-1366-3	7994/09-23
Belgium	University of Gent	floor	250	600 x 300	not required	130	NBN 713020	312
	University of Liège	wall	a) 150	400 x 400	not required	90	NBN 713020	308
			b) 330	400 x 400		90		
	wall	B2) 150	400 x 400	not required	149	NBN 713020	310	
		C2) 330	400 x 300	not required	149			
wall	340	300 x 300	not required	180	NBN 713020	309		
France	C.S.T.B	wall	340	500 x 300	not required	180	Arêté 21.4.83	613
		wall	180	450 x 250		120		630
Germany	DIBt, Berlin	wall	340	1500 x 1100	not required	S90	DIN 4102	161
		floor	340	800 x ∞				
Italy	CSI	wall	340	600 x 500	not required	REI 180	CM 91	1003
		wall	190	300 x 400	not required	REI 120	CM 91	1010
		wall	340	400 x 300	not required	REI 180	CM 91	1011
		floor	340	300 x 200	not required	REI 180	CM 91	1012
South Africa	S.A.B.S	wall	330	600 x 650	not required	120	SABS 0177: Part II	4005
Spain	I.N.I.A.	floor	240	460 x 300	not required	180	UNE 23.802	1201
		floor	150	450 x 400				
Sweden	Statens Provnings- anstalten SITAC	wall or	300	400 x 1000	not required	EI90	SBN-PFS 1983-2	818
		floor	210	400 x 1000		EI120		
Switzerland	VKF	wall	340	1,3 m2	not required	S90	DIN 4102	161
		floor		0,6 m2				
UK	LPC (FIRTO)	wall	340	505 x 510	not required	180	BS 476, Part 8 (72)	903
		floor	180	500 x 500	not required	180		906
		floor	1) 340	∅ 100	passed	F180 T180	UL 1479 ISO 834	912
			2) 340	∅ 180	passed	F180 T151		
			3) 340	∅ 120	passed	F180 T180		
	4) 340		∅ 120	passed	F180 T180			
5) 340	∅ 280	passed	F180 T180					
wall	180	750 x 750	not required	248	BS 476, p. 20	913		
USA	UL	floor (floor)	330 (13')	810 x 1020 (32" x 40')	passed	F240 T240	UL 1479 ASTM E-814	2010
		(a)			passed	F180 T - rating depending on cable type		
	(b)	330 (13')	810 x 1020 (32" x 40')	passed	T180	ASTM E-814	2011	
	FM	floor (floor)	330 (13')	810 x 1020 (32" x 40')	passed			F180 T 120-180 depending on cable type
(b)	330 (13')	810 x 1020 (32" x 40')	passed					

All test reports on request.

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