

# CHARCOAT

## CharCoat IS (4 Hour Fire Rated Sealant)

### PRODUCT DESCRIPTION

CharCoat IS is designed to prevent the spread of fire and smoke through openings in fire rated walls and floors including openings formed around building service penetrations.

CharCoat IS will also maintain the acoustic design performance in walls and floors. CharCoat IS cures when it is subjected to atmospheric conditions, however it will retain a degree of elasticity for joint movement. Under fire exposure, CharCoat IS creates a robust fire seal by the formation of a durable intumescent char.

CharCoat IS can be used with a suitable filling material, i.e. stone wool or backing material in order to secure correct width to depth ratio and to reduce the shrinking of the sealant during curing. Minimum depth and maximum width are included in the installation instructions. Thermal activation takes place at about 180°C when the material will expand (intumesce) and prevent the passage of fire and smoke for periods up to 4 hours.

### PROPERTIES

- High end formula, certified Worldwide
- Classified for fire sealing all types of constructions and building service penetrations
- Very high sound insulation
- Low emissions - environmentally and user friendly
- Simple to apply with a smooth surface finish
- Permanently flexible
- No priming necessary for application to most materials
- Suitable for most surfaces, included concrete, masonry, steel, gypsum, glass, plastics and most non-porous surfaces
- Hardens quickly, tack free after 1 hour (the fire performance specification of the joint filler has been derived when the joint filler has been let to cure for a month)
- 18 months storage time (under correct conditions)
- 30 years working life

### SOUND INSULATION

Description	Sound Reduction
Single sided seal $\geq 12$ mm depth	62 dB
Double sided seal $\geq 12$ mm depth	> 62 dB

CharCoat IS has been tested at EXOVA BM Trada (UKAS accredited); according to EN ISO 10140-2:2010. Usage of any backing material is optional, due to the tests being conducted with sealant only.



# TDS

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VERSION	4.0
PURPOSE/CHANGES	COMPANY ADDRESS
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### TECHNICAL DATA

Condition	Water based acrylic sealant
Specific gravity / Density	1.61
Flash point	None
Reaction to fire	Class D-s1, d1
Expansion in fire	1 : 2-3
Non-sticky	Max. 75 minutes
Film forming	Max. 25 minutes
Totally hardened	3 to 5 days depending on thickness and temperature
Flexibility	12.5% according to ISO 11600
Durability/service	Class Z2
BWR 3	Use category IA <sub>1</sub> , S/W <sub>3</sub>
Thermal conduct.	0.845 W/mK (+/- 3%) @ 20mm depth
Storage	18 months stored in unopened cartridges. To be stored in temperatures between 5°C and 35°C
Working life	30 years
Service temperature	-20 to +70°C
Application temp.	+5 to +35°C
Compatibility	Suitable for use with most materials, but should not be used in direct contact with bituminous materials
Limitations	Should not be used in permanently damp areas
Classification	CE-marked - Sealant for fire rated joints and penetrations class EI 240
Standard colours	White
Colour codes	White: RAL 9002 (Approx.)
Packaging	Box containing 25 cartridges each 310 ml (1800/pallet) Box containing 12 foil packed each 600 ml (990/pallet) 5kg Pails 20kg Pails
Warranty	25 Years / Product only. Please refer to our full Terms and Conditions of sale.



## EMISSIONS DATA (INDOOR AIR QUALITY)

Compound	Emmission Rate after 3 Days	Emmission Rate after 4 Weeks
TVOC	83 µg/m³	< 5 µg/m³
TSVOC	n.d.	< 5 µg/m³
VOC w/o NIK	n.d.	< 5 µg/m³
R Value	n.d.	< 1
Formaldehyde	< 3 µg/m³	n.d.
Acetaldehyde	< 3 µg/m³	n.d.
Sum for+ace	< 0.002 ppm	n.d.
Carcinogenic	< 1 µg/m³	< 1 µg/m³
n.d. or < means not detected		

CharCoat IS complies with the requirements of GEV and the results correspond to the EMICODE emission class EC 1PLUS which is the best possible environmental and indoor hygiene health protection mark.

Construction	Seal Position	Min. Seal Depth	Backing Material	Max Seal Width	Fire Resistance
Flexible walls comprise gypsum, masonry, aerated concrete or concrete (≥ 75 mm thick)	Both sides against steel partition head track	12.5mm	None necessary	25mm	EI 45 (E 60)
	Both sides against steel partition side track	12.5mm	None necessary	15mm	EI 45 (E 60)
Flexible walls comprise gypsum, masonry, aerated concrete or concrete (≥ 100 mm thick)	Both sides against steel partition head track	12.5mm	None necessary	25mm	EI 90 (E 90)
		12.5mm	Mineral stone wool minimum 12.5mm deep	30mm	EI 120 (E 120)
		25mm	None necessary	30mm	EI 120 (E 120)
	Both sides against steel partition side track	12.5mm	None necessary	15mm	EI 90 (E 90)
Rigid walls comprise masonry, aerated concrete or concrete, within walls or between the head of walls and the soffit of floor slabs (≥ 150 mm thick)	Single sided in horizontal seals	12.5mm	Mineral stone wool minimum 20mm deep	30mm	EI 120 (E 120)
		25mm	Mineral stone wool minimum 20mm deep	30mm	EI 60 (E 240)
		10mm	Mineral stone wool minimum 60mm deep	50mm	EI 60 (E 240)
	Single sided in vertical seals	25mm	Mineral stone wool minimum 48mm deep	30mm	EI 120 (E 240)
		10mm	Mineral stone wool minimum 60mm deep	50mm	EI 120 (E 120)
		15mm	Mineral stone wool minimum 20mm deep	30mm	EI 240 (E 240)
Rigid floors comprise aerated concrete or concrete within floors or between floors and walls (≥ 150 mm thick)	Single sided soffit face	25mm	Mineral stone wool minimum 25mm deep	100mm	EI 60 (E 120)
		25mm	Mineral stone wool minimum 25mm deep	100mm	EI 180 (E 180)
	Single sided top face	10mm	Mineral stone wool minimum 90mm deep	100mm	EI 240 (E 240)
		15mm	Mineral stone wool minimum 25mm deep	100mm	EI 120 (E 120)
	Double sided top and soffit	15mm	Mineral stone wool with density 140kg/m3	100mm	EI 180 (E 180)
		15mm	minimum 25mm deep		
	15mm	Mineral stone wool minimum 25mm deep	30mm	EI 240 (E 240)	

### Fire resistance class E - Integrity | Fire resistance class EI - Insulation

No liability can be accepted for the information provided in this document although it is published in good faith and believed to be correct. CharCoat Passive Fire Protection reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.



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