

Product name	Fire Stop compound
Product Code	BD-C75
Revision Date	30/01/2016
Revision number	01



INTRODUCTION

Fire Stop Compound is a gypsum based mortar material, used to reinstate the fire resistance performance of floor constructions where they have been provided with apertures for the penetrations of multiple services. Fire Stop Compound is supplied as a dry material, and is mixed with water to the required ratio prior to installation.

Fire Stop Compound when mixed is self-supporting in a floor to spans of 700mm. Temporary shuttering is required to support the wet weight of the Fire Stop Compound. The seal is high strength, non-combustible and is load bearing. Fire Stop Compound has a fire resistance to EN1366-3 up to EI120.

The advantages of the Silverseal Compound are as follows:

- Fire Integrity up to 4 hours
- Rapid setting, zero shrinkage formulation - can be used as pourable or trowel grade, gas tight seals
- Excellent workability ranging from stiff to pourable mix.
- Good load bearing Performance in floor seals. (Consult Blue diamond Technical Team for details)



SPECIFICATION

Description	Off White single part gypsum-based compound.
Density	850 - 950 kg/m ³
Loadbearing	2.5k N/m ² UDL
Fire Resistance	EN1366 EI 120 / E120 / 240mins
Classification	EN13501:2
Acoustic Performance R'w (C; Ctr) (dB)	47 dB reduction at 100 mm
Max Unsupported Span	700 mm (Consult FSi for larger spans)
Thermal Conductivity (U Value) @100mm	0.21 - U Value I / 'R' 2.1
Thermal Resistance 'R' (t/k) @100mm	0.48
Expansion on Setting (%)	0.1

Fire Stop Compound is intended for sealing around all types of M&E service penetrations through floors and walls, where a rigid seal is required. The unique Fire Stop Compound enables even the most demanding applications to be covered.

Mixing

Fire Stop Compound can be mixed preferably by mechanical paddle or manually if required. Measure out the correct amount of clean water into a clean container to achieve the desired consistency.

(Fire Stop Compound: water ratio):
Pourable Mix ratio of 2½ : 1 Trowelable Mix ratio of 3 : 1

Gradually add the Fire Stop Compound stirring continually. Continue mixing until the Fire Stop Compound is mixed to a smooth even consistency. Any spillage should be wiped up with a damp cloth before setting occurs. May stain Pipes and services. Mix only enough material sufficient for use within the recommended pot life (20-30 minutes). Pot life and set times will be reduced for lower water content and higher temperatures.

Installation should not be carried out when temperatures are above 35°C. Setting times are normally between 30 and 90 minutes. Warning: Do not attempt to extend working time by remixing with additional water once the mortar has started to set, as this will interfere with the setting process. Always mix in clean buckets. Using dirty buckets containing remains of compound from earlier mixes may reduce working time.

Fit damming board/shuttering to bottom of opening. Damming materials must be able to support the wet weight of the compound under pouring conditions. Pour Fire Stop Compound to the required 100mm thickness.

Load Bearing Floor

Seals in a concrete slab opening, e.g. within a service riser, the unique combination of structural properties of Fire Stop Compound, particularly Fire Stop Compound, enables the finished seal to support considerable loads, over quite large spans, without the need for steel reinforcement.

Wall Penetrations

Fire Stop Compound can be mixed and trowelled into a vertical opening, and worked around services without slumping. They can also be cast into blocks for building into larger openings, using a stiff mix of the same compound as bedding.



Load Bearing Seals around Unsupported Fire Dampers

Fire Stop Compound has been successfully tested at BRE around both single and multiple fire damper assemblies, supported only by the mortar, in wall and floor openings. The excellent crushing strength and shear resistance of Fire Stop Compound seal ensures that the installation frame will be retained in the wall or floor, if the ductwork should collapse, even when the HVAC Installation frame is not tied back to the structure.

Setting and Hardening

Unlike cement-based fire stopping mortars, Blue diamond plaster based compound achieve maximum wet strength in only about four hour after casting Ultimate strength is reached when dry fully hardened. The drying time will be dependent on the prevailing ambient conditions.

Fire Stop Compound is available in 20kg sacks. Add powder to clean tap water to the required consistency and coverage. Fire Stop Compound is to be installed in accordance with installation requirements. Extra installation details and technical support are available from FSI technical department. Please contact Blue diamond for Loadbearing calculations at all times.



INSTALLATION

Installation details and technical support are available from Blue diamond technical department or on the internet at www.bluediamondfireprotection.com

Wall Openings

For small holes and gaps, trowel a stiff mix into the opening to the correct depth. For larger holes, use an appropriate damming material to support the mix until it sets, or, if a fair faced finish is required to both sides, consider using a sandwich construction. Alternatively, the Fire Stop Compound may be pre-cast into convenient sized blocks, a stiff mix being used as a bedding mortar. All combustible services (Plastic Pipes etc.) should have a tested fire rated closure device/material fitted prior to the pouring of the Fire Stop Compound. These are typically Blue diamond Intumescent pipe wraps.

Floor Openings

When sealing holes in floor slabs, appropriate shuttering must be installed, cut to fit tightly around any services within the opening, to support the wet mix until it sets. Non-combustible shuttering materials, such as mineral fibre slab, can be left in place, but combustible materials must be removed, after the mix has set. For complex penetrations it may be preferable, to initially form a thin seal around all services, with a nominal 5-10mm layer of the Fire Stop Compound mix. Once this has set, the remaining depth of seal, should be poured in one operation. All combustible services (Plastic Pipes etc.) should have a tested fire rated closure device/material fitted prior to the pouring of the Fire Stop Compound. These are typically Blue diamond Intumescent pipe wraps.

Yield

Typical number of 20kg bags per m² at 100mm thick for Fire stop Compound is 4 Bags, though service sizes, mixing ratios could possibly effect yield.

For further information see Installation Manual.





COMPLIANCE

Fire Stop Compound is manufactured in the EU, meeting the highest quality standard in compliance to ISO EN 9001. Tested to EN standards, CE Marked to ETAG 026 and BS 476.



STORAGE AND DISPOSAL

Fire Stop Compound is may not be affected by an outdoor environment. However, for long term storage and ease of installation it is recommended that it should be stored indoors, ideally in dry conditions. Ideal storage temperature between -5°C and +30°C. For health and safety details refer to FSi technical department.



ENVIRONMENT

Blue diamond contribute to Green Building by having a manufacturing policy of 100% recycle and 0% landfill for all products.

Fire Stop contributes to a Green Building: -

Low VOC (Inert Product no Fibre's).

No Power Tools required for installation (no energy source required).

Smoke and Air Tightness.

Noise Reduction.

Thermal Insulation.

Recycling of Packaging.

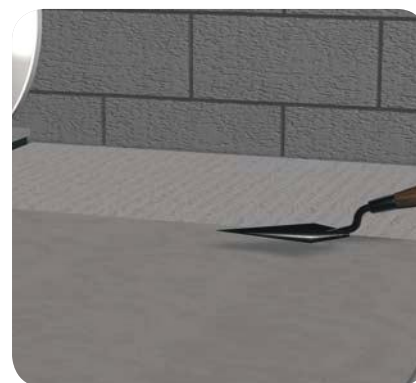
Manufactured in accordance with ISO 14001.

The life cycle of Fire Stop Compound is over 20 years.





FIRE STOP COMPOUND



Product name	Fire stop Compound
Product Code	BD-C75
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Section 1: Identification of the substance/mixture and of the company / undertaking



1.1 Product identifier

Product name	Fire stop Compound
Product Code	BD-C75



1.2. Relevant identified uses of the substance or mixture and uses advised against



1.3. Details of the supplier of the safety data sheet

Company Name	Blue Diamond Fire Protection Al Quoz -1, P.O.Box: 25468 Dubai - UAE
Tel	(00971) 4 340 3700
Fax	(00971) 4 340 5122
Email	bluedbc@eim.ae



1.4. Emergency telephone number

Section 2: Classification of the substance or mixture



2.1. Composition

Dry Blended mixture of Calcium Sulphate Hemihydrate together with aggregates and traces of modifying additives and pigments (below 1%).



Blue Diamond Fire Protection
Al Quoz -1, P.O.Box: 25468
Dubai - UAE



Tel: +971 4 340 3700
Fax: +971 4 340 5122
Email: bluedbc@eim.ae
www.bluediamondfireprotection.com



Product	Material	Concentration (by weight)	CAS Number
Silverseal Standard	Calcium Sulphate Perlite	80 - 95% 5 - 20%	10034-76-1 93763-70-3
Silverseal EN Standard	Calcium Sulphate Perlite	80 - 95% 5 - 20%	10034-76-1 93763-70-3
Silverseal HS	Calcium Sulphate Limestone	50 - 70% 30 - 50%	10034-76-1 47 - 31 -1
Silverseal EN HS	Calcium Sulphate Limestone	50 - 70% 30 - 50%	10034-76-1 471 - 31 -1

**2.2. Reach**

Fire stop Compound are exempt from the obligation to pre-register under REACH legislation. The exemption is granted in Annex V, Paragraph 7 as all materials are naturally occurring minerals found in nature.

Gypsum based plasters are not classified hazardous under CHIP 2 Regulations 1994 (see Section 15).

Section 3: Hazardous Information**3.1. Classification of the Mixture****Classification of the Mixture**

This mixture is not classified as hazardous according to regulation (EC) No. 1272/2008 [EU-GHS/CLP]

**3.2. Label elements****Label elements**

This mixture is not labelled according to regulation (EC) No.1272/2008 [EU -GHS/CLP].

**3.3. Other elements****Other elements**

Dust may be produced during dry state handling



Section 4: First aid measures**4.1. First-Aid Measures**

Skin contact	Wash immediately with plenty of soap and water
Eye contact	Wash eye with clean water for 10 minutes and seek medical advice if irritation persists
Ingestion	Wash out mouth and drink plenty of water
Inhalation	Remove person to fresh air

Section 5: Fire-Fighting measures**5.1. Fire-fighting measures**

Fire-fighting measures	Fire stop Compound is non-combustible and inhibits the spread of flame. Paper packaging is combustible, extinguish with water ect.
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Section 6: Accidental Release measures**6.1. Accidental Release measures**

Accidental Release measures	Control and suppress dust formation, avoid dry sweeping. Use water spraying and/or vacuum systems. Prevent Fire stop Compound contaminating drains and water courses as a powder or a slurry. Refer to Section 8 - Exposure/Protection and Section 13 - Disposal considerations.
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Section 7: Handling and Storage**7.1. Handling and Storage**

Handling and Storage	Minimise and control dust when opening bags or mixing products. Avoid prolonged or repeated contact with Silverseal Compound on the skin or eye contact. Wear protective clothing when mixing, or working with powdered or wet mortar mix. If handled manually use the correct "Materials Handling Techniques". Protect from dampness and humidity in storage.
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Section 8: Exposure Controls / Personal Protection



8.1. Exposure Controls / Personal Protection

Occupational Exposure Limites

Substance	Calcium Sulphate
Total Inhalable	10mg/m ³ 8hr TWA OES
Total Respirable	5mg/m ³ 8hr TWA
Substance	Perlire
Total Inhalable	10mg/m ³ 8hr TWA MEL
Total Respirable	1mg/m ³ 8hr TWA MEL
Substance	Limestone
Total Inhalable	10mg/m ³ 8hr TWA MEL
Total Respirable	4mg/m ³ 8hr TWA MEL

Refer to current edition of HSE E40 Occupational Exposure Limites

Respiratory	Control dust formation and ventilate the work area. If dust cannot be controlled wear a half facemask to EN149 Class FFP1
Skin	To avoid prolonged or repeated wet contact wear impermeable gloves. To avoid skin contact wear protective overalls and footwear To reduce the effects of skin contact apply a barrier cream to the hands
Eye	If powder or slurry are likely wear safety goggles to BS2092

Section 9: Physical and Chemical properties



9.1. Physical and Chemical Properties

Physical State	Powder, white to off white, or grey or pink
Odour	Odourless
pH	Neutral
Melting point/range	>1000°C
Flash Point	N/A
Ignition Temp	N/A
Decomposition Temp	Not Determined



Section 10: Stability and Reactivity



10.1. Stability and Reactivity

Conditions to avoid	None
Materials to avoid	None
Hazardous Decomposition Products	None

Section 11: Toxicological Information



11.1. Toxicological Information

Inhalation	Dust may irritate respiratory system, no known long-term effects.
Skin Contact	Prolonged contact with powder or wet mix, may dry skin leading to irritation
Eye Contact	Powder or wet mix may irritate by particulate in the short term
Ingestion	Ingestion is unlikely to cause any signification reaction or long term effect

Section 12: Ecological Information



12.1. Ecological Information

Mobility	Very sparingly soluble in water, forms a suspension and solidifies within approximatley 1 hour
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Section 13: Dispose



13.1. Dispose

Dispose	At an authorised landfill site. In England, northern Ireland and Wales dispose of to a seperate cell for high sulphate waste. For other countries dispose of in accordance with local and national control regulations. Allow wet mixed plaster to go off before dispoal. Do not wash mixed or dry plaster into drains or surface waters as this can cause water pollution
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Section 14: Transport Information



14.1. Transport Information

Not classified as hazardous for transport



Section 15: Regulatory Information**15.1. Regulatory Information**

Not classified as hazardous under CHIP 2 as amended by CHIP 96:- The Chemicals (Hazard Information and Packaging) Regulation 1994 as amended by CHIP 96 (Amendment) Regulations 1996.

Occupational Exposure Limits EH40 (reviewed and Reprinted annually) The Control of Substances Hazardous to health (COSHH) Regulations 1994.

This Safety Data Sheet is prepared in accordance with CHIP regulations and Directive 91/155/EEC

Section 16: Other Information**16.1. Other Information****Recommended uses:**

Material for use only as a fire-stopping Compound
This information reflects typical values and is not a product specification
No warranty is hereby expressed or implied
Such information given in this Product Health & Safety Information sheet is to the best of Blue diamond knowledge and belief accurate and reliable. It is the uses's responsibility to satisfy itself as to the suitability and completeness of such information for their own particular use.



UL-EU CERTIFICATE

Certificate No. UL-EU-001026-CPR
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Date of Issue 2016-08-16

Certificate Holder Blue Diamond Fire Protection
P.O. Box 25468
Dubai
UAE

Manufacturer A/011

Certified Product Type Fire Stop – Mortar
Product Trade Name BD-C75
Trademark N/A
Rating/Classification See Appendix

Harmonised Technical Specifications ETAG 026-2 / EN 13501-2
Supporting Documentation ETA 14/0281, EC – CERTIFICATE OF CONSTANCY OF PERFORMANCE - 1121 – CPR – JA5066
Additional information Additional test evidence is held on file
Expiry date 2026-08-15



Certification Manager
Chris Miles

This is to certify that representative samples of the Certified Product listed above have been investigated by Underwriters Laboratories to the Standard(s) indicated on this Certificate, in accordance with the UL Global Services Agreement and the UL-EU Mark Service Terms and Conditions ("Agreement"). The Certificate Holder is entitled to use the UL-EU Mark for the Certified Product listed on the certificate and manufactured at the production site(s) listed, in accordance with the terms of the Agreement. Only those products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.

Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-001026-CPR
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This certificate relates to the use of BD-C75 for fire stopping where services penetrate floors. The detailed scope is given in pages 3 to 5 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 240 minutes (E 240 / EI 180).

The product is certificated on the basis of:

- i) ETA 14/0281 EC – CERTIFICATE OF CONSTANCY OF PERFORMANCE 1121 – CPR – JA5066
- ii) Inspection and surveillance of factory production control by UL
- iii) Fire resistance test data in accordance with 1366-3: 2009
- iv) Classification in accordance with EN 13501-2
- v) Durability and Servicability as defined in ETAG 026-2

The durability class of BD-C75 is Z₁ - intended for use at internal conditions with high humidity, excluding temperatures below 0°C

Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-001026-CPR
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Product-type: Mortar		Intended use: Penetration Seal
Basic requirement for construction work	Basic Requirement	Basic requirement for construction work
BWR 1 Mechanical resistance and stability		
-	None	-
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class F
EN 13501-2	Resistance to fire	See page 4
BWR 3 Hygiene, health and environment		
EN 1026:2000	Air permeability (material property)	No performance determined
ETAG 026-3, Annex C	Water permeability (material property)	No performance determined
Declaration of manufacturer	Release of dangerous substances	Declaration of manufacturer
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003 ISO 11600	Adhesion	No performance determined
BWR 5 Protection against noise		
EN 10140-2/ EN ISO 717-1	Airborne sound insulation	$R_w (C;C_{tr})= 47 (-1;-3)$
EN 10140-3/ EN ISO 717-2	Impact sound insulation	No performance determined
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667 or EN 12939	Thermal properties	No performance determined
EN ISO 12572 EN 12086	Water vapour permeability	No performance determined
General aspects relating to fitness for use		
ISO 8339: 2005, ISO 9046: 2004 & ISO 7389: 2003	Durability and serviceability	Z_1
BWR 7 Sustainable use of natural resources		
-	-	No performance determined

No performance determined

Appendix UL-EU CERTIFICATE

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Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Service / Min. 450 mm long Local Interrupted (LS) Insulation	Fire Resistance (mins.)*	
						E	EI
Concrete Floor	150	1100 x 1100	Flush to top of floor	100	Copper/cast iron pipe 18-107 mm diameter and 0.8 – 1.5 mm wall thickness / 50 mm thick Rockwool H&V pipe section insulation (min 150 kg/m ³)	240	30
					Steel pipe 40-165 mm diameter and 3 - 5 mm wall thickness / 50 mm thick Rockwool H&V pipe section insulation (min 150 kg/m ³)	240	120
					Electrical cables up to 80 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	120	120
					Non-sheathed wire up to 24 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	240	60
			Flush to top of floor + additional step around services above main seal	100 + 50	Telecomm cables up to 21 mm diameter, in a bundle of up to 100 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	180	180
Masonry/ Concrete Wall	150	1100 x 1100	Any position within the depth of the wall	100	Copper/cast iron pipe 18-107 mm diameter and 0.8 – 1.5 mm wall thickness / 50 mm thick Rockwool H&V pipe section insulation (min 150 kg/m ³)	240	30
					Steel pipe 40-165 mm diameter and 3 - 5 mm wall thickness / 50 mm thick Rockwool H&V pipe section insulation (min 150 kg/m ³)	240	120
					Electrical cables up to 80 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	180	120
					Non-sheathed wire up to 24 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	240	180
					Telecomm cables up to 21 mm diameter, in a bundle of up to 100 mm diameter / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	180	180
					Steel cable trays and ladders up to 500 mm wide / 25 mm thick Rockwool Duct Wrap insulation (min 45 kg/m ³)	90	90

* All pipes are Capped/Uncapped (C/U) and Capped/Capped (C/C) configuration

Appendix UL-EU Certificate

Certification Mark	UL-EU mark
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The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Certificate Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at www.ul.com.