



FIRE RATED

SITE GUIDE



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Why use our Gorilla Fire Rated range?

Our comprehensive range of fire rated solutions have been extensively tested on their ability to delay combustion, provide protection and allow valuable time to exit premises when fire strikes.

The information in this booklet covers common applications where fire resistance is required, for more specific applications or should you require further technical assistance call us on 0800 TECSPEC.



What is a High Temp product?

A high-temperature rating typically means the duration that the product can resist temperatures of up to 1500°C.



What is a Fire Rated product?

A fire-resistance rating typically means the duration for which a passive fire protection system can withstand a standard fire resistance test. This can be quantified simply as a measure of time, or it may entail a host of other criteria, involving other evidence of functionality or fitness for purpose.



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SITE GUIDE



F.R

EXPANDING FOAM



Up to 360min

Features

Fire retardant up to 360 minutes[^] (refer to test data), efficient seal against smoke and gas, excellent adhesion to many building materials, acoustic rating 57Db, insulation properties - R value 3.12, high bond strength, very good filling characteristics, excellent stability, no shrink and limited post expansion. Can be painted after full cure.

Uses & Substrates

Fire retardant installation of windows and door frames, fire and smoke retardant sealing of connections between partition walls, ceilings and floors. Filling of cavities, sealing of all openings in roof constructions, sealing of cable and pipe penetrations. Creating of sound proof screen, bonding of insulation materials, application of sound deadening layers and improving thermal insulation in cold store areas.

Code	Description	Size	Colour
20160	Gorilla F.R. Expanding Foam Click&Fix	750ml	Red
20169	Gorilla F.R. Expanding Foam Aerosol	750ml	Red





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SITE GUIDE



FIRESTOP

MS SEALANT



MS
SEALANT



Up to 229min

Features

Gorilla Firestop MS Sealant is a high quality single component joint sealant with high adhesive strength and excellent elasticity. It is based on MS Polymer chemically neutral and fully elastic. It has a very high UV and marine resistance, while being very easy to tool and finish.

Uses & Substrates

For use in high movement joints in construction, automotive, marine and aerospace areas where a tough flexible rubber is required with good fire retardant.

Code	Description	Size	Colour
56219	Gorilla Firestop MS Sealant	600ml	Grey



FIRECRYL

ACRYLIC SEALANT



More than 240min

Features

Gorilla Firecryl is a one component acoustically rated, highly qualified, emulsion based sealant for fire retarding constructions. After application the product forms a tough plastic rubber fire rated seal by evaporation of water. Intumescent at temperatures above 250°C.

Uses & Substrates

Ideal for interior joints with low or medium movement, and has excellent adhesion to all porous surfaces, with a fire rating of up to 4 hours (refer full test results).

Code	Description	Size	Colour
20060	Gorilla Firecryl Acrylic Sealant		310ml White
21427	Gorilla Firecryl Acrylic Sealant		600ml Grey



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SITE GUIDE



FIRESIL

NEUTRAL SILICONE



Up to 240min

Features

Gorilla Firesil is a high quality, neutral, elastic, one-component sealant based on silicones which conforms to the DIN 4102 B1 Flammability Rating and has a fire retardancy of up to 4 hours in certain joint configurations.

Uses & Substrates

Suitable for both interior and exterior applications, with excellent adhesion to a wide range of building and glazing materials.

Code	Description	Size	Colour
20165	Gorilla Firesil Neutral Silicone	310ml	Grey



FIRE CEMENT

SEALANT



Up to 120min

Features

Gorilla Fire Cement is a single component ready to use heat resistant sealant which cures to form a hard seal and will resist temperatures of up to 1500° C.

Uses & Substrates




Suitable for both interior and exterior applications of sealing joints and openings of furnaces, barbecues and pizza ovens. Also can be used as a heat retardant sealant of existing constructions.

Code	Description	Size	Colour
20190	Gorilla Fire Cement Sealant	310ml	Black



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SITE GUIDE

	 <p>Gorilla FR Expanding Foam 750ml Aerosol Code: 20169</p>	 <p>Gorilla FR Expanding Foam 750ml Click & Fix Code: 20160</p>	 <p>Gorilla Firestop MS Sealant 600ml Code: 56219</p>
Application Areas	Insulation of window and door frames, sealing of connection joints, filling of cavities, cable and pipe penetrations, etc.	Insulation of window and door frames, sealing of connection joints, filling of cavities, cable and pipe penetrations, etc.	Ideal for expansion joints and connection joints in prefabricated, high rise and all usual construction applications.
Fire Rating* See test results	Up to 360 minutes * †	Up to 360 minutes * †	Up to 240 minutes * †
Temp. Resistance (cured)	-40°C until +90°C	-40°C until +90°C	-40°C until +90°C
Acoustic Rating	Max 75Db*	Max 75Db*	N/A
Interior/Exterior (*when painted)	Interior/Exterior *	Interior/Exterior *	Interior/Exterior *
Paintable	Paintable	Paintable	Paintable
UV Resistant	N/A	N/A	UV Resistant
Waterproof	Waterproof	Waterproof	Waterproof
Movement	Low movement	Low movement	+/-25%
No Shrink	No shrink	No shrink	No shrink
Flexible/Elongation	N/A	N/A	Flexible
Curing Rate (*at 20°C)	30mm bead/2hrs	30mm bead/2hrs	2mm bead/24hrs
Skin Formation (*at 20°C)	10 minutes	30 minutes	30 minutes
Tack Free Time	25 minutes	25 minutes	10-15 minutes
Tensile Strength	>17N/cm ² (DIN 53427)	>17N/cm ² (DIN 53427)	N/A
Solvent Free	Solvent free	Solvent free	Solvent free
No Odour	No odour	No odour	No odour
Storage (*from production date)	12 months *	12 months *	12 months *
Colour	Red	Red	Grey
VOC	28% / 189gr/Lt	28% / 189gr/Lt	<2% / 28gr/Lt
Packaging	Aerosol 750ml	Aerosol 750ml	N/A
	Click & Fix 750ml	N/A	Click & Fix 750ml
	Sausage 600ml	N/A	N/A
Approvals	<p>*Test Report 9279 - University Ghent to NBN 713.020, En 1366-4 BS 476: Part 20 - Warrington Fire Research Report 113610. France: CSTB Report D'Essai RS00-067. France: Italy: CSI Report 1125RF. Australia: WFRFA Report 45717 to AS 1530.4 and AS 4072. † Applies to liner joint applications.</p> <p>*Test Report 9279 - University Ghent to NBN 713.020, En 1366-4 BS 476: Part 20 - Warrington Fire Research Report 113610. Italy: CSI Report 1125RF. Australia: WFRFA Report 45717 to AS 1530.4 and AS 4072. Various applications with fire doors. † Applies to liner joint applications.</p> <p>*CSTB France Report No. RS03-007 ODICE - ISO R834 at least 2 hours Warrington - UK: Assessment Report 139271 to BS 476: Part20: 1987 Italy R.E.I. CSI 1125RF. † Applies to liner joint applications.</p>		



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SITE GUIDE

	 <p>Gorilla Firecryl Acrylic Sealant 310ml/600ml</p> <p>Code: 20060/21427</p>	 <p>Gorilla Firesil Neutral Sealant 310ml</p> <p>Code: 20165</p>	 <p>Gorilla Fire Cement Sealant 310ml</p> <p>Code: 20190</p>
Application Areas	Interior fire proofing applications; filling of cracks in concrete and plaster work, sealing of connection joints.	Fire rated expansion joints. All building and glazing joints which require a fire rating.	Heat resistant sealings of joints and openings at furnaces, heating systems, central heatings, bbqs etc.
Fire Rating* See test results	More than 240 minutes * †	Up to 240 minutes * †	+120 minutes *
Temp. Resistance (cured)	-20°C until +90°C	-40°C until +140°C	Up to 1500°C
Acoustic Rating	STC 60	N/A	N/A
Interior/Exterior (*when painted)	Interior/Exterior	Interior/Exterior	Interior/Exterior
Paintable	Paintable	N/A	Paintable
UV Resistant	UV Resistant	UV Resistant	N/A
Waterproof	Weather resistant (after cure)	Waterproof	N/A
Movement	+/-10%	+/-25%	Low movement
No Shrink	10%	No shrink	N/A
Flexible/Elongation	Flexible	Flexible/900%	N/A
Curing Rate (*at 20°C)	N/A	1mm bead/24 hours	N/A
Skin Formation (*at 20°C)	20 minutes	25 minutes	N/A
Tack Free Time	20 minutes	Ca 20 minutes	N/A
Tensile Strength	N/A	0.8N/mm ²	N/A
Solvent Free	Solvent free	Solvent free	Solvent free
No Odour	No odour	No odour	No odour
Storage (*from production date)	12 months *	9 months *	12 months *
Colour	White (310ml), Grey (600ml)	Grey	Black
VOC	<1% / <15gr/Lt	N/A	N/A
Packaging	Cartridge 310ml	Cartridge 310ml	Cartridge 310ml
	Sausage 600ml	Sausage 600ml	N/A
Approvals	<p>*United Kingdom: BS476: part 20: 1987 France: CSTB no: 93.35164 EC: IMO Fire Test Procedure Code, Annex 1, Part 5 and Part 2. EC: No. MED 0050288 (96/98 EC (MED) International: ISO 1716/1973 EC: Imo resolution A653 (16).</p> <p>† Applies to liner joint applications.</p>	<p>*Test Report 9278 - University Ghent to NBN 713.020, En 1366-4 BS 476: Part 20 - Warrington Fire Research Report DIN4102-B1 - Institute for Bautechnik, Berlin TNO-rapport 2000-CVB-R0070073.</p> <p>† Applies to liner joint applications.</p>	<p>*Test report 7830 - University of Ghent to NBN713.020 BS 476: Part 20 - Warrington Fire Research Report C81770. Refer to testing approvals on www.holdfast.co.nz. Gorilla Fire Cement is designed to be non-combustible below the temperature of 1500°C. Other fire rated products have a degree of combustibility far lower than this (usually, around 90-100°C), this is why Gorilla Fire Cement can be reheated each time you use your pizza oven and then cooled without losing the properties of the original product.</p>


For further information please go to our website or refer to product technical datasheet www.holdfast.co.nz.




FIRE RATED

SITE GUIDE

TEST RESULTS - LINEAR JOINT APPLICATIONS

Product Tested	Wall/Width x Depth	Backing Material	Integrity	Heat Insulation	Completion Date
 <p>Gorilla F.R. Expanding Foam</p>	200mm x11mm CC filled throughout	None	229 min	229 min	1999 Ghent
	200mm x41mm CC filled throughout	None	110 min	110 min	1999 Ghent
	100mm x30mm CC filled throughout	None	50 min	50 min	1999 Ghent
	100mm x11mm CC filled throughout	None	104 min	103 min	1999 Ghent
	200mm x40mm PC filled throughout	None	232 min	218 min	2000 CSTB France
	200mm x30mm PC filled throughout	None	291 min	291 min	2000 CSTB France
	200mm x20mm PC filled throughout	None	360 min	360 min	2000 CSTB France
	200mm x10mm PC filled throughout	None	360 min	360 min	2000 CSTB France
	200mm x30mm CC filled throughout	None	120 min	120 min	2004 CSI 1125 RF Italy
	200mm x10mm CC filled throughout	None	180 min	180 min	2004 CSI 1125 RF Italy
	100mm x10mm CC filled throughout	None	90 min	90 min	2004 CSI 1125 RF Italy

FIRE DOORS - LINEAR JOINT APPLICATIONS


Product Tested	Type of fire door	Rf value in min	Benor/ATG Certificate	Completion Date
 <p>Gorilla F.R. Expanding Foam</p>	Bimex	None	98/2229	1998 Ghent
	Bruyzeel	None	00/2186	2000 Ghent
	De Coene	None	02/1639	2002 Ghent
	Theuma	None	98/2274	1998 Ghent
	General for fire doors	None	01/2887	2001 Ghent
	Vimimetal metal doorframe	None		2003 Ghent



FIRE RATED

SITE GUIDE

EXTERNAL ONLY - LINEAR JOINT APPLICATIONS

Product Tested	Wall/Width x Depth	Backing Material	Integrity	Heat Insulation	Completion Date
 Gorilla Firestop MS Sealant	150mm/30mm x 20mm PC	PU	332 min	270 min 30 sec	2003 CSTB France
	150mm/10mm x 10mm PC	PU	>360 min	240 min (thermocouple failure)	2003 CSTB France
	200mm/10mm x 10mm PC	PU	>360 min	>360 min	2003 CSTB France
	100mm/10mm x 10mm CC	PE	>180 min	>180 min	2004 CSI Italy
	200mm/15mm x 15mm CC	PE	>240 min	>240 min	2008 Ghent Joint C
	200mm/30mm x 20mm CC	PE	>240 min	>240 min	2008 Ghent Joint H

Product Tested	Wall/Width x Depth	Backing Material	Integrity	Heat Insulation	Completion Date
Gorilla Fire Cement	200mm/10mm x 45mm	PE	120 min	120 min	1995 Ghent


Product Tested	Wall/Width x Depth	Backing Material	Integrity	Heat Insulation	Completion Date
 Gorilla Firesil Neutral Sealant	200mm/11mm x 10mm CC	PE	>240 min	>210 min	1999 Ghent
	200mm/30mm x 20mm CC	PE	225 min	225 min	1999 Ghent
	100mm/33mm x 20mm CC	PE	187 min	116 min	1999 Ghent
	100mm/11mm x 10mm CC	PE	202 min	146 min	1999 Ghent
	150mm/30mm x 20mm PC	PU	>360 min	180 min (thermocouple failure)	2003 CSTB France
	150mm/10mm x 10mm PC	PU	>360 min	251 min 30 sec	2003 CSTB France
	200mm/30mm x 20mm PC	PU	>360 min	180 min (thermocouple failure)	2003 CSTB France
	200mm/10mm x 10mm PC	PU	>360 min	>360 min	2003 CSTB France
	200mm/10mm x 10mm CC	PE	>180 min	>180 min	2004 CSI Italy
	100mm/10mm x 10mm CC	PE	>180 min	>180 min	2004 CSI Italy




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SITE GUIDE

WALL SECTIONS & INTERNAL APPLICATIONS - LINEAR JOINT APPLICATIONS

Product Tested	Wall/Width x Depth	Backing Material	Integrity	Heat Insulation	Completion Date
 Gorilla Firecryl Acrylic Sealant	100mm/20mm x 20mm CC	PE	>240 min	210 min	1999 Ghent
	100mm/11mm x 10mm CC	PE	>240 min	187 min	1999 Ghent
	150mm/20mm x 20mm PC	PU	298 min	180 min (thermocouple failure)	2003 CSTB France
	150mm/10mm x 10mm PC	PU	>360 min	240 min (thermocouple failure)	2003 CSTB France
	200mm/20mm x 20mm PC	PU	>360 min	>360 min	2003 CSTB France
	100mm/10mm x 10mm PC	PU	>360 min	>360 min	2003 CSTB France
	200mm/20mm x 20mm CC	PE	>180 min	>180 min	2004 CSI Italy
	200mm/10mm x 10mm CC	PE	>180 min	>180 min	2004 CSI Italy
	100mm/10mm x 10mm CC	PE	120 min	120 min	2004 CSI Italy

WALL PENETRATION TESTS

Product Tested	Type of penetration	Wall thickness	Integrity	Heat Insulation	Completion Date
 Gorilla Firecryl Acrylic Sealant	160mm steel tube	200mm	>180 min	>180 min	2004 CSI Italy
	20mm steel pipe	200mm	>180 min	>180 min	2004 CSI Italy
	20mm steel pipe	100mm	>180 min	>180 min	2004 CSI Italy
	20mm steel pipe	100mm	>180 min	>180 min	2004 CSI Italy

All sealants were tested double sided. Refer to the technical data and full test results on www.holdfast.co.nz.



APPROVALS

General:
 UK:
 UK:
 France:
 France:
 Holland:
 Belgium:
 Australia:
 Italy:

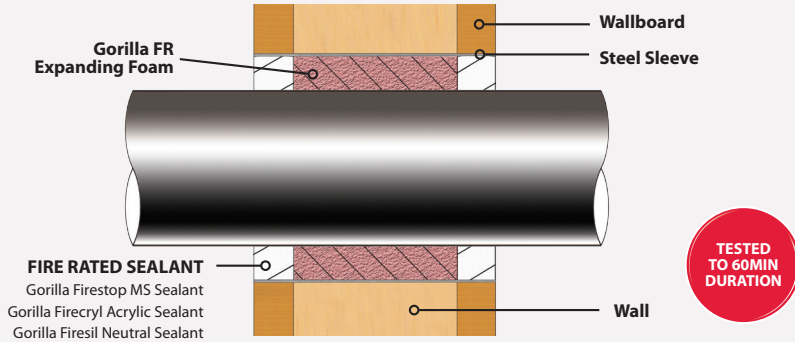
EN 1366-4 - Test Report 9297, University of Ghent
 BS476: Part20: 1987 - WFRN N° C1 13610
 BS476: Part20: 1987 - WFRN N° 139271 (sealants)
 Rapport d'Essai RS00-067 (only Firestop 1)
 Rapport d'Essai RS03-007 (sealants)
 NEN 6069: 1997 - TNO Rapport 2000-CVB-R00703
 NBN 713.020 - Test Report 9297 - University of Ghent
 WRFA 45716 & 45717 to AS1530.4 and AS4072.1
 CSI 1125 RF



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FIGURE 1: FIRE RATED PIPE PENETRATION



What is pipe penetration? Pipe penetration seals are used to allow tubes or pipes to expand thermally, they penetrate the shell of a boiler or similar pressure casing without damaging the surrounding shell or pressure casing. **NOTE :** Metal penetrations do not require sealant but for aesthetics Firecryl may be required.

FIGURE 2: FIRE RATED CABLE TRAY PENETRATION

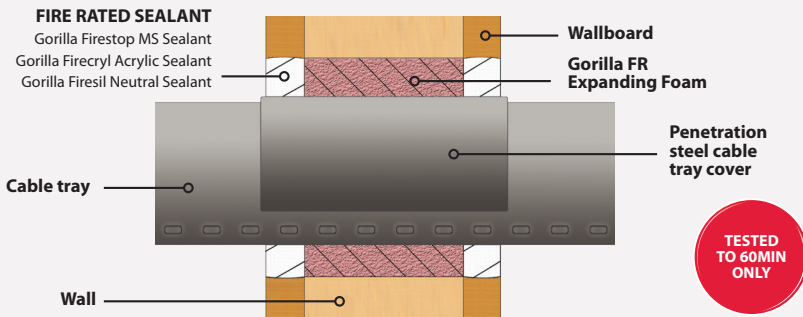
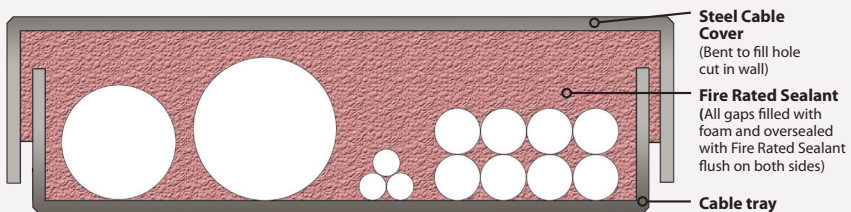


FIGURE 2B: SECTIONS THROUGH PENETRATIONS





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