



# STARFIX-PSC ADHESIVE MORTAR

## Technical Guide



# ABOUT US

Established in 1974 as a single bearing shop in Durban, South Africa; BMG's aggressive growth strategy has included acquisitions, supplemented by a steady organic growth discipline. BMG attracts best-of-breed talent resulting in technical expertise that differentiates BMG in the industry. Staff are truly part of the BMG family and its success.

BMG boasts an accredited in-house technical and commercial training academy which fosters a culture of staff development and career advancement; it's all about sustainability.

The net result, is a company that reliably supplies and supports 70 000 customers in 15 countries with the widest range of industrial engineered products and expert services in Africa via 105 branches.

BMG is positioned to deliver bespoke 360 degree solutions to its customers, and subsequently return on investment to its investors and shareholders. BMG plays a pivotal role in supporting the productivity and production targets of all Industrial, Manufacturing, Mining and Agricultural sectors of the economies in the countries it serves. With an enviable reputation as Africa's largest distributor, manufacturer and service provider of the highest quality engineering consumables and components; including

- Bearings & Seals
- Power Transmission Components
- Drives, Motors and Controllers
- Hydraulics, Pneumatics and Filtration
- Heavy and Light Duty Materials Handling
- Valves and Lubrication
- Fasteners, Gaskets and Tools

BMG is a level 4 BEE contributor with ISO 9001 Quality Assurance certification. Health and safety of its employees and customers is a paramount focus and the company adheres to ISO 45001. BMG is also committed to environmental care and sustainability and strictly follows the ISO 14001 charter.

As a key contributor to the Invicta Holdings stable, BMG has played a major part in Invicta's unique achievement of being rated in South Africa's Top 100 Companies for 21 consecutive years.



## Bonded Anchor with Styrene

### Description

STARFIX-PSC is a general purpose resin for solid and hollow structures with relatively short cure time.

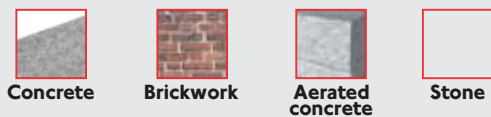
### Features

- Suitable for solid and hollow substrates.
- 300ml cartridge fit a mastic standard gun.

### Typical Applications

- Masonry Support
- Guardrails
- Hanger Brackets

### Sustainable for Use on:



Product Description	Qty. per Box	Cartridge Type
SPX PSC 300	12	300ml Chubpack & Nozzle

Concrete									
Size	mm	M8	M10	M12	M16	M20	M24	M30	Drawing
Thread diameter	d	8	10	12	16	20	24	30	
Hole diameter in substrate	d <sub>0</sub>	10	12	14	18	24	28	35	
Installation torque	T <sub>inst</sub>	10	20	40	80	120	180	300	
Wrench size	Sw	13	17	19	24	30	36	46	
Min. hole depth in substrate	h <sub>0</sub>	85	95	115	130	175	215	245	
Standard installation depth*	h <sub>nom</sub>	80	90	110	125	170	210	240	
Min. substrate thickness	h <sub>min</sub>	110	120	140	155	218	266	310	
Min. spacing	s <sub>min</sub>	40	45	55	63	85	105	120	
Min. edge distance	c <sub>min</sub>	40	45	55	63	85	105	120	

Lightweight Solid Substrates										
Size	mm	M8	M10	M12	M16	M8	M10	M12	M16	Drawing
Thread diameter	d	8	10	12	16	8	10	12	16	
Hole diameter in substrate	d <sub>0</sub>	10	12	14	18	10	12	14	18	
Installation torque	T <sub>inst</sub>	5	8	10	15	3	4	6	10	
Wrench size	Sw	13	17	19	24	13	17	19	24	
Min. hole depth in substrate	h <sub>0</sub>	85	90	100	110	85	90	100	110	
Installation depth	h <sub>nom</sub>	80	85	95	105	80	85	95	105	
Min. spacing	s <sub>min</sub>	50	50	50	50	54	50	50	54	
Min. edge distance	c <sub>min</sub>	50	50	50	50	54	50	50	54	

Concrete									
Size	mm	M8	M8	M10	M10	M12	M12	M16	Drawing
Thread diameter	d	8	8	10	10	12	12	16	
Mesh sleeve size	d <sub>0</sub>	12x50	12x80	15x85	15x125	15x85	15x125	20x85	
Hole diameter in substrate	T <sub>inst</sub>	12	12	16	16	16	16	20	
Installation torque	Sw	3	3	4	4	6	6	10	
Wrench size	h <sub>0</sub>	13	13	17	17	19	19	24	
Min. hole depth in substrate	h <sub>nom</sub>	55	85	90	130	90	130	90	
Installation depth	h <sub>min</sub>	50	80	85	125	85	125	85	
Min. spacing	s <sub>min</sub>	100	100	100	100	100	100	120	
Min. edge distance	c <sub>min</sub>	100	100	100	100	100	100	120	

## Installation Solid Substrates

- Drill hole to the required diameter and depth for stud size being used.
- Clean the hole with brush and hand pump at least four times each. It is very important and necessary before installation.
- Insert cartridge into gun and attach nozzle.
- Dispense to waste until even colour is obtained.
- Insert the mixing nozzle to the far end of the hole and inject resin, slowly withdrawing the nozzle as the hole is filled to 2/3 of its depth.
- Immediately insert the stud, slowly and with slight twisting motion.
- Remove any excess resin around the hole before it sets and leave it undisturbed until the curing time elapses.
- Attach fixture and tighten the nut to the required torque.



## Installation for Hollow Substrates & Substrates with Voids

- Drill hole to the required diameter and depth for stud size being used.
- Insert mesh sleeve into the hole.
- Insert cartridge into gun and attach nozzle.
- Dispense to waste until even colour is obtained.
- Insert the mixing nozzle to the far end of the hole and inject resin, slowly withdrawing the nozzle as the hole is filled to 2/3 of its depth.
- Immediately insert the stud, slowly and with slight twisting motion.
- Remove any excess resin around the hole before it sets and leave it undisturbed until the curing time elapses.
- Attach fixture and tighten the nut to the required torque.



Minimum Curing & Working Time				
Dry/Wet Concrete	Resin Temp.	Concrete Temp.	Curing Time	Working Time
Dry Concrete	5°C/41°F	-5°C/23°F	6 h	60 min.
	5°C/41°F	0°C/32°F	3 h	40 min.
	5°C/41°F	5°C/41°F	2 h	20 min.
	10°C/50°F	10°C/50°F	80 min.	12 min.
	15°C/59°F	15°C/59°F	60 min.	8 min.
	20°C/68°F	20°C/68°F	45 min.	5 min.
	25°C/77°F	30°C/86°F	20 min.	2 min.

Stardix-PSC Resin & Steel Rods M8 - M30							
Non cracked Concrete			Steel Class 4.8				
Performance Data for Single Anchor Without Influence of Edge Distance & Spacing							
Size	M8	M10	M12	M16	M20	M24	M30
Embedment depth	80	90	110	125	170	210	240
<b>Mean Ultimate Loads</b>							
Tension Load	21,6	34,8	48,3	82,9	119,3	132,7	157,1
Shear Load	18,3	29,0	42,2	78,5	122,5	176,5	280,5
<b>Characteristic Loads</b>							
Tension Load	18,0	28,3	39,4	56,5	90,8	110,8	113,1
Shear Load	9,0	14,0	21,0	39,0	61,0	88,0	140,0
<b>Design Loads</b>							
Tension Load	10,6	15,7	21,9	31,4	50,4	52,8	53,9
Shear Load	7,2	11,2	16,8	31,2	48,8	70,4	112,0
<b>Recommended Loads*</b>							
Tension Load	7,6	11,2	15,6	22,4	36,0	37,7	38,5
Shear Load	5,1	8,0	12,0	22,3	34,9	50,3	80,0

Starfix-PSC Resin & Stainless Steel Rods M8 - M30							
Non cracked Concrete			Steel Class 8.8				
Performance Data for Single Anchor Without Influence of Edge Distance & Spacing							
Size	M8	M10	M12	M16	M20	M24	M30
Embedment depth	80	90	110	125	170	210	240
<b>Mean Ultimate Loads</b>							
Tension Load	22,7	38,0	48,3	82,9	119,3	132,7	157,1
Shear Load	29,3	46,4	67,4	125,6	196,0	282,4	448,4
<b>Characteristic Loads</b>							
Tension Load	19,1	28,3	39,4	56,5	90,8	110,8	113,1
Shear Load	15,0	23,0	34,0	63,0	98,0	141,0	224,0
<b>Design Loads</b>							
Tension Load	10,6	15,7	21,9	31,4	50,4	52,8	53,9
Shear Load	12,0	18,4	17,2	50,4	78,4	112,8	179,2
<b>Recommended Loads*</b>							
Tension Load	7,6	11,2	15,6	22,4	36,0	37,7	38,5
Shear Load	8,6	13,1	12,3	36,0	56,0	80,6	128,0

Stardix-PSC Resin & Steel Rods M8 - M30							
Non cracked Concrete			Steel Grade A4				
Performance Data for Single Anchor Without Influence of Edge Distance & Spacing							
Size	M8	M10	M12	M16	M20	M24	M30
Embedment depth	80	90	110	125	170	210	240
<b>Mean Ultimate Loads</b>							
Tension Load	22,7	38,0	48,3	82,9	119,3	132,7	157,1
Shear Load	25,6	40,6	59,0	109,9	171,5	247,1	392,7
<b>Characteristic Loads</b>							
Tension Load	19,1	28,3	39,4	56,5	90,8	110,8	113,1
Shear Load	13,0	20,0	29,0	55,0	86,0	124,0	196,0
<b>Design Loads</b>							
Tension Load	10,6	15,7	21,9	31,4	50,4	52,8	53,9
Shear Load	8,3	12,8	18,6	35,3	55,1	79,5	125,6
<b>Recommended Loads*</b>							
Tension Load	7,6	11,2	15,6	22,4	36,0	37,7	38,5
Shear Load	5,9	9,1	13,3	25,2	39,4	56,8	89,7

# ACCESSORIES



## STH-Studs Hexagonal

### Hexagonal Head Studs Zinc Plated, 4.8 Steel

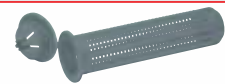
Product Code	mm		PCS
	mm	PCS	
STH-STUDS-08110	M8x110	10	
STH-STUDS-08160	M8x160	10	
STH-STUDS-10130	M10x130	10	
STH-STUDS-10170	M10x170	10	
STH-STUDS-10190	M10x190	10	
STH-STUDS-12160	M12x160	10	
STH-STUDS-12190	M12x190	10	
STH-STUDS-12220	M12x220	10	
STH-STUDS-12260	M12x260	10	
STH-STUDS-12300	M12x300	5	
STH-STUDS-16190	M16x190	10	
STH-STUDS-16220	M16x220	10	
STH-STUDS-16260	M16x260	10	
STH-STUDS-16300	M16x300	5	
STH-STUDS-16380	M16x380	1	
STH-STUDS-20260	M20x260	5	
STH-STUDS-20300	M20x300	1	
STH-STUDS-24300	M24x300	1	
STH-STUDS-30380	M30x380	1	

### Hexagonal Head Studs Zinc Plated, 8.8 Steel

Product Code	mm		PCS
	mm	PCS	
STH-STUD-88-08110	M8x110	10	
STH-STUD-88-08160	M8x160	10	
STH-STUD-88-10130	M10x130	10	
STH-STUD-88-10170	M10x170	10	
STH-STUD-88-10190	M10x190	10	
STH-STUD-88-12160	M12x160	10	
STH-STUD-88-12190	M12x190	10	
STH-STUD-88-12220	M12x220	10	
STH-STUD-88-12260	M12x260	10	
STH-STUD-88-12300	M12x300	5	
STH-STUD-88-16190	M16x190	10	
STH-STUD-88-16220	M16x220	10	
STH-STUD-88-16260	M16x260	10	
STH-STUD-88-16300	M16x300	5	
STH-STUD-88-16380	M16x380	1	
STH-STUD-88-20260	M20x260	5	
STH-STUD-88-20300	M20x300	1	
STH-STUD-88-24300	M24x300	1	
STH-STUD-88-30380	M30x380	1	

### Hexagonal Head Studs A4 Stainless Steel

Product Code	mm		PCS
	mm	PCS	
STH-STUD-A4-08110	M8x110	10	
STH-STUD-A4-08160	M8x160	10	
STH-STUD-A4-10130	M10x130	10	
STH-STUD-A4-10170	M10x170	10	
STH-STUD-A4-10190	M10x190	10	
STH-STUD-A4-12160	M12x160	10	
STH-STUD-A4-12190	M12x190	10	
STH-STUD-A4-12220	M12x220	10	
STH-STUD-A4-12260	M12x260	10	
STH-STUD-A4-12300	M12x300	5	
STH-STUD-A4-16190	M16x190	10	
STH-STUD-A4-16220	M16x220	10	
STH-STUD-A4-16260	M16x260	10	
STH-STUD-A4-16300	M16x300	5	
STH-STUD-A4-16380	M16x380	1	
STH-STUD-A4-20260	M20x260	5	
STH-STUD-A4-20300	M20x300	1	
STH-STUD-A4-24300	M24x300	1	
STH-STUD-A4-30380	M30x380	1	



## Sleeves

### Plastic Sleeve

Product Code	mm			mm	mm	mm
	mm	mm	mm			
STH-PLS-12050-10	12	50	M6-M8	10	-	-
STH-PLS-15085-10	16	85	M8-M10	10	-	-
STH-PLS-15125-10	16	125	M8-M10	10	-	-
STH-PLS-20085-10	20	85	M12	10	-	-
STH-PLS-12050-100	12	50	M6-M8	-	100	-
STH-PLS-15085-100	16	85	M8-M10	-	100	-
STH-PLS-15125-100	16	125	M8-M10	-	100	-
STH-PLS-20085-100	20	85	M12	-	100	-
STH-PLS-12050-1000	12	50	M6-M8	-	-	1000
STH-PLS-15085-1000	16	85	M8-M10	-	-	1000
STH-PLS-15125-1000	16	125	M8-M10	-	-	1000
STH-PLS-20085-1000	20	85	M12	-	-	1000



## STH-Studs Flat

### Flat Head Studs Zinc Plated, 4.8 Steel

Product Code	mm		PCS
	mm	PCS	
STF-STUDS-08110	M8x110	10	
STF-STUDS-08160	M8x160	10	
STF-STUDS-10130	M10x130	10	
STF-STUDS-10170	M10x170	10	
STF-STUDS-10190	M10x190	10	
STF-STUDS-12160	M12x160	10	
STF-STUDS-12190	M12x190	10	
STF-STUDS-12220	M12x220	10	
STF-STUDS-12260	M12x260	10	
STF-STUDS-12300	M12x300	5	
STF-STUDS-16190	M16x190	10	
STF-STUDS-16220	M16x220	10	
STF-STUDS-16260	M16x260	10	
STF-STUDS-16300	M16x300	5	
STF-STUDS-16380	M16x380	1	
STF-STUDS-20260	M20x260	5	
STF-STUDS-20300	M20x300	1	
STF-STUDS-24300	M24x300	1	
STF-STUDS-30380	M30x380	1	

### Flat Head Studs Zinc Plated, 8.8 Steel

Product Code	mm		PCS
	mm	PCS	
STF-STUD-88-08110	M8x110	10	
STF-STUD-88-08160	M8x160	10	
STF-STUD-88-10130	M10x130	10	
STF-STUD-88-10170	M10x170	10	
STF-STUD-88-10190	M10x190	10	
STF-STUD-88-12160	M12x160	10	
STF-STUD-88-12190	M12x190	10	
STF-STUD-88-12220	M12x220	10	
STF-STUD-88-12260	M12x260	10	
STF-STUD-88-12300	M12x300	5	
STF-STUD-88-16190	M16x190	10	
STF-STUD-88-16220	M16x220	10	
STF-STUD-88-16260	M16x260	10	
STF-STUD-88-16300	M16x300	5	
STF-STUD-88-16380	M16x380	1	
STF-STUD-88-20260	M20x260	5	
STF-STUD-88-20300	M20x300	1	
STF-STUD-88-24300	M24x300	1	
STF-STUD-88-30380	M30x380	1	

### Flat Head Studs A4 Stainless Steel

Product Code	mm		PCS
	mm	PCS	
STF-STUD-A4-08110	M8x110	10	
STF-STUD-A4-08160	M8x160	10	
STF-STUD-A4-10130	M10x130	10	
STF-STUD-A4-10170	M10x170	10	
STF-STUD-A4-10190	M10x190	10	
STF-STUD-A4-12160	M12x160	10	
STF-STUD-A4-12190	M12x190	10	
STF-STUD-A4-12220	M12x220	10	
STF-STUD-A4-12260	M12x260	10	
STF-STUD-A4-12300	M12x300	5	
STF-STUD-A4-16190	M16x190	10	
STF-STUD-A4-16220	M16x220	10	
STF-STUD-A4-16260	M16x260	10	
STF-STUD-A4-16300	M16x300	5	
STF-STUD-A4-16380	M16x380	1	
STF-STUD-A4-20260	M20x260	5	
STF-STUD-A4-20300	M20x300	1	
STF-STUD-A4-24300	M24x300	1	
STF-STUD-A4-30380	M30x380	1	

## Mixers

### Static Mixers

Product Code	mm	mm	mm
STH-MIXER-10G-10	10	-	-
STH-MIXER-14G-10	10	-	-
STH-MIXER-QUADRO-10	10	-	-
STH-MIXER-ECO-10	10	-	-
STH-MIXER-10G-100	-	100	-
STH-MIXER-14G-100	-	100	-
STH-MIXER-QUADRO-100	-	100	-
STH-MIXER-ECO-100	-	100	-
STH-10G-1000	-	-	1000
STH-MIXER-14G-1000	-	-	1000
STH-MIXER-QUADRO-1000	-	-	1000
STH-MIXER-ECO-1000	-	-	1000



## Dispenser Gun

# BRINGING THE WORLD'S BEST BRANDS TO YOU

In the bid to procure cutting-edge components at competitive prices, BMG is able to capitalise on long-standing relationships with leading manufacturers dedicated to excellence in design and production.

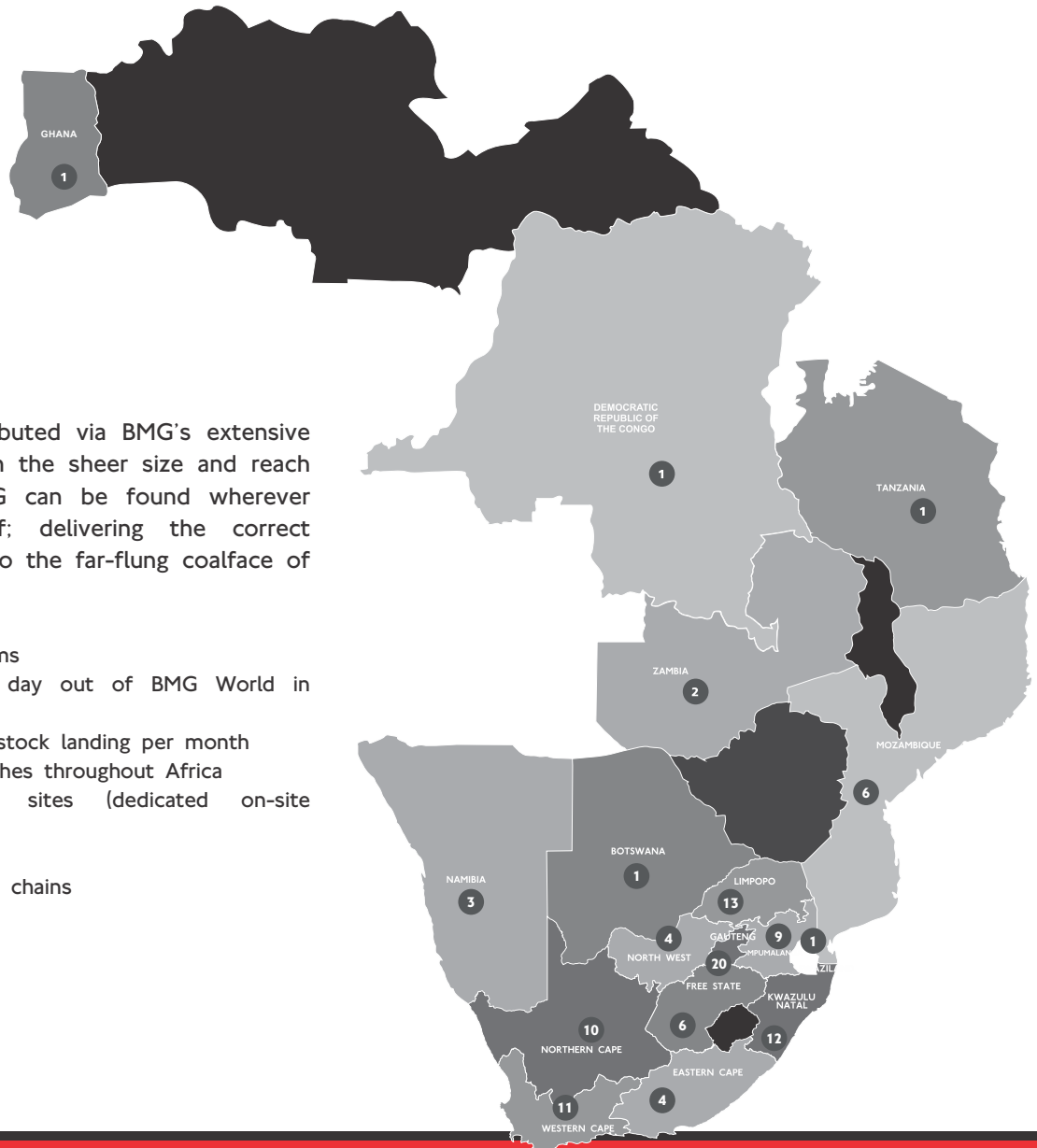
Products are imported from around the globe and brought to BMG's strategically located distribution facilities and regional service centres via the main distribution hub in Johannesburg - BMG World. A world-class facility boasting 308 000m<sup>3</sup> of fully stocked warehouse space, an accredited training facility and unlimited engineering capabilities.

## Preferred Brands:



## Our Extensive Coverage Throughout Africa

**105**  
BRANCHES



Products and services are distributed via BMG's extensive distribution network. It's through the sheer size and reach of our infrastructure, that BMG can be found wherever industry has established itself; delivering the correct components at the right time, to the far-flung coalface of our customers' operations.

- Over 300 000 product line items
- Around 4 500 transfers per day out of BMG World in Johannesburg
- Over 1 000 tons of imported stock landing per month
- 105 strategically situated branches throughout Africa
- Vendor Managed Inventory sites (dedicated on-site stockholding)
- International exports
- Locally empowered distribution chains

# *Be* PART

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WEBSITE:

**[www.bmgworld.net](http://www.bmgworld.net)**



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