

# RES400VESF

Type : High Strength Fast Curing Thixotropic Grout  
 Material : Vinylester Styrene Free Resin Grout  
 Packaging : 380ml 10/1 Ratio Plastic Cartridge

## Description

A high quality bonded anchor for high performance based on Vinylester Resin (Styrene Free). CE OPTION 7 approved for applications on concrete even in dry or flooded bore holes. Certified for applications with threaded bars class 5.5, 8.8, stainless steel and reinforced bars. Also suited for application on wood, it gives safe fixing and high load values even on semi-solid and hollow supports. Has higher upper and lower service temperature limits than conventional polyester resins. Not classified as hazardous, non-flammable and low odour. With excellent adhesion, high strength, corrosion resistant, chemical resistant, suitable for overhead use.

## Features

- Approved Ce Option 7 for applications on non-cracked concrete with Threaded bars and rebar.
- Certified for applications in flooded bore holes.
- Approved DIBT for applications on solid and hollow bricks.
- Fire Resistance Certification F120.
- Water impermeable joint.
- No expansion effect, allowing fixing close to the edges.

## Application

Its is suited for fixing medium and heavy loads on solid and hollow supports: stone, concrete, aerated concrete, solid and hollow bricks. Anchoring of machinery, installing reinforcement bars, dowelling and starter bars, foundation bolts, hand rails, safety gates, fences, balustrades, cable trays, wall ties.

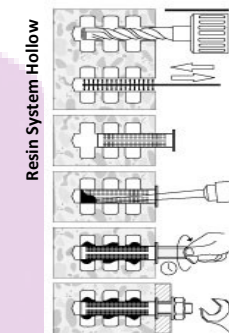
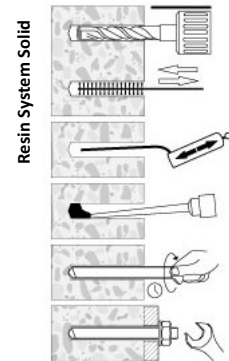
## Base Material

### Without perforated sleeves

Concrete  
 Hard Natural Stone  
 Solid Rock  
 Solid Masonry

### With perforated sleeves

Hollow Bricks  
 Hollow Blocks  
 Voided Stone or Brick



d = Stud Threaded diameter  
 do = Drill hole diameter.  
 hnom = Anchor embedment depth.  
 Nrec = Tensile Load (kN)  
 hmin = minimum structural thickness (mm)  
 Tmax = Maximum torque (Nm)

## Setting Details

Stud Size d	Hole Diameter Substrate do	Hole Diameter Fixture Lt	Anchor Length L (mm)	Hole Depth L (mm)	Maximum Fixing Thickness h1 (mm)	Standard Anchor Embedment tfix (mm)	Rec. Torque hnom Nm	Edge Distance (mm)	Anchor Spacing (mm)
M8	10	9	110	85	20	80	11	80	160
M10	12	11	130	95	25	90	22	90	180
M12	14	13	160	115	30	110	38	110	220
M16	18	17	190	130	40	125	95	125	250
M20	24	22	260	175	45	170	170	170	340
M24	28	28	300	215	50	260	210	210	420
M30	35	35	380	285	60	480	280	280	560

Rebar Size (mm) d	500N Reinforcing Bar	
	Tensile Vrec kN	Shear Nrec kN
8	10.1	7.9
10	15.3	12.4
12	21.2	17.8
16	34.2	31.6
20	42	49.5
25	55.1	77.1
32	59.2	126.2

## Recommended Loads (C20/25 Concrete)

Stud Size (mm) d	5.8 Grade		8.8 Grade		A4-80 Studding		No. Fixing 380ml Cartridge	No. Fixing 300ml Cartridge	Trigger Pulls approx.
	Tensile Vrec kN	Shear Nrec kN	Tensile Vrec kN	Shear Nrec kN	Tensile Vrec kN	Shear Nrec kN			
M8	9.1	5.4	10.1	8.4	10.1	6.7	100	60	1
M10	13.8	8.6	13.8	13.3	13.8	10.6	58	40	2
M12	19.4	12.5	19.4	19.3	19.4	15.4	38	27	3
M16	26.8	23.3	26.8	35.9	26.8	28.8	24	16	5
M20	35.7	27.7	35.7	56.0	35.7	44.9	8	5	10
M24	44.6	52.4	44.6	80.7	44.6	64.6	5	3	20
M30	51.9	118.6	51.9	118.6	51.9	74.1	2	1	40

## Gel & Cure Times

Temp C	Gel Mins	Load Time mins
-5	50	90
5	20	30
15	7	20
25	6	20
35	3	20
25	55.1	77.1

# RES400PE

Type : High Strength Fast Curing Thixotropic Grout  
 Material : Unsaturated Polyester Resin Grout  
 Packaging : 380ml 10/1 Ratio Plastic Cartridge



## Description

A plastic cartridge containing a base resin consisting of polyester resins, a catalyst consisting of organic peroxide and insert fillers in a paste form. Used as a bonding agent for solid and hollow supports. It is suitable for use in concrete, solid and perforated bricks, lightweight and aggregate blocks in a wide range of applications. Specifically good where a waterproof bond is required, chemical resistant, vibration proof and stress free or close to edge fixing is required.

## Applications

Anchoring of machinery, installing reinforcement bars, dowelling and starter bars, foundation bolts, hand rails, safety gates, fences, balustrades, cable ties, wall ties, rail tracks, tie-back anchors etc.

## Benefits

Excellent adhesion, high strength, corrosion resistance, thermally resistant, suitable for overhead use.

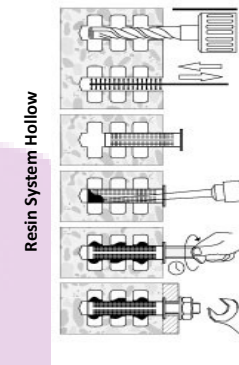
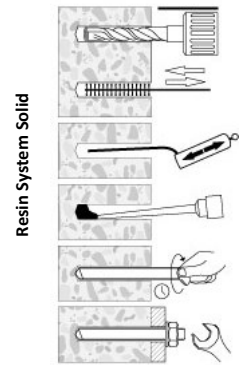
## Base Material

### Without perforated sleeves

Concrete  
 Hard Natural Stone  
 Solid Rock

### With perforated sleeves

Hollow Bricks  
 Hollow Blocks  
 Voided Stone or Brick



- d = Stud Threaded diameter
- do = Drill hole diameter.
- hnom = Anchor embedment depth.
- Nrec = Tensile Load (kN)
- hmin = minimum structural thickness (mm)
- Tmax = Maximum torque (Nm)

## Recommended Loads C20/25 Concrete

Thread Diameter mm	Tensile kN	Shear kN	Torque Nm
8	4.9	5.8	10
10	7.5	9.2	20
12	10.9	13.4	40
16	14.9	24.9	60
20	25.3	39.2	100
24	27.4	54.7	150
30	35	60	300

## Recommended Loads 20N/mm Brick

Tensile kN	Torque kN
1.5	4
3	7
4.2	11
5.1	25
n/a	n/a
n/a	n/a
n/a	n/a

## Recommended Loads 7N/mm Block

Tensile kN	Torque kN
0.9	3
1.4	6
2.5	10
4	23
n/a	n/a
n/a	n/a
n/a	n/a

## Gel & Cure Times

Temp C	Gel mins	Load Time mins
5	15	120
10	12	80
20	6	40
30	3	20

## Technical Installation Data Internally Threaded Sockets

Code	Internal Thread	Lfil	L	SOLID SUPPORTS			Rec Tensile Nrec kN	Rec Shear Vrec kN
				do	Hnom	hi		
RESITS06	M6	20	80	10	80	85	1.5	1.5
RESITS08	M8	25	80	12	80	85	2	3
RESITS10	M10	30	80	14	80	85	2.5	3.5
RESITS12	M12	35	80	16	80	85	3	4
RESITS16	M16	40	125	28	125	135	3	4

Code	Internal Thread	Lfil	L	With Retention Sleeve			Rec Tensile Nrec kN	Rec Shear Vrec kN
				do	Hnom	hi		
RESITS06	M6	20	80	16	80-85	90	1.5	2
RESITS08	M8	25	80	16	80-85	90	1.5	2
RESITS10	M10	30	80	16	80-85	90	1.5	2
RESITS12	M12	35	80	22	80-85	90	1.5	2
RESITS16	M16	40	125	n/a	n/a	n/a	n/a	n/a

All dimensions in mm, unless otherwise stated.

# RES300PSF



Type : High Strength Fast Curing Thixotropic Grout  
 Material : Unsaturated Polyester Resin Grout  
 Packaging : 300ml 10/1 Ratio Plastic Cartridge

## Description

A plastic cartridge containing a base resin consisting of polyester resins, a catalyst consisting of organic peroxide and inert fillers in a paste form. Used as a bonding agent for solid and hollow supports. It is suitable for use in concrete, solid and perforated bricks, lightweight and aggregate blocks in a wide range of applications. Specifically good where a waterproof bond is required, chemical resistant, vibration proof and stress free or close to edge fixing is required.

## Applications

Anchoring of machinery, installing reinforcement bars, dowelling and starter bars, foundation bolts, hand rails, safety gates, fences, balustrades, cable ties, wall ties, rail tracks, tie-back anchors etc.

## Benefits

Excellent adhesion, high strength, corrosion resistance, thermally resistant, suitable for overhead use.

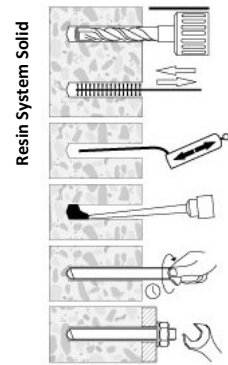
## Base Material

### Without perforated sleeves

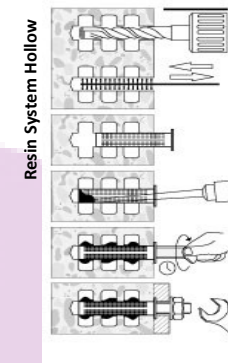
Concrete  
 Hard Natural Stone  
 Solid Rock

### With perforated sleeves

Hollow Bricks  
 Hollow Blocks  
 Voided Stone or Brick



Resin System Solid



Resin System Hollow

- d = Stud Threaded diameter
- do = Drill hole diameter.
- hnom = Anchor embedment depth.
- Nrec = Tensile Load (kN)
- hmin = minimum structural thickness (mm)
- Tmax = Maximum torque (Nm)

## Recommended Loads C20/25 Concrete

Thread Diameter mm	Tensile kN	Shear kN	Torque Nm
8	4.9	5.8	10
10	7.5	9.2	20
12	10.9	13.4	40
16	14.9	24.9	60
20	25.3	39.2	100
24	27.4	54.7	150
30	35	60	300

## Recommended Loads 20N/mm Brick

Tensile kN	Torque kN
1.5	4
3	7
4.2	11
5.1	25
n/a	n/a
n/a	n/a
n/a	n/a

## Recommended Loads 7N/mm Block

Tensile kN	Torque kN
0.9	3
1.4	6
2.5	10
4	23
n/a	n/a
n/a	n/a
n/a	n/a

## Gel & Cure Times

Temp C	Gel mins	Load Time mins
5	15	120
10	12	80
20	6	40
30	3	20

## Technical Installation Data Internally Threaded Sockets

Code	Internal Thread	Lfil	L	SOLID SUPPORTS			Rec Tensile Nrec kN	Rec Shear Vrec kN
				do	Hnom	hi		
RESITS06	M6	20	80	10	80	85	1.5	1.5
RESITS08	M8	25	80	12	80	85	2	3
RESITS10	M10	30	80	14	80	85	2.5	3.5
RESITS12	M12	35	80	16	80	85	3	4
RESITS16	M16	40	125	28	125	135	3	4

Code	Internal Thread	Lfil	L	With Retention Sleeve			Rec Tensile Nrec kN	Rec Shear Vrec kN
				do	Hnom	hi		
RESITS06	M6	20	80	16	80-85	90	1.5	2
RESITS08	M8	25	80	16	80-85	90	1.5	2
RESITS10	M10	30	80	16	80-85	90	1.5	2
RESITS12	M12	35	80	22	80-85	90	1.5	2
RESITS16	M16	40	125	n/a	n/a	n/a	n/a	n/a

All dimensions in mm, unless otherwise stated.

# RES-SPIN

## EPOXY ACRYLATE SPIN IN CAPSULES



A styrene free epoxy acrylate resin contained in a glass capsule, with a resin to hardener ratio of 10 parts to 1.

Used for bonding externally threaded studs or reinforcing bar to base materials; Concrete, hard natural stone, solid rock, solid masonry. Features expansion free fixing for close to free edge fixing with medium to high load capabilities and cost effective fixing.

Code	Stud Size	Price Per 100	Hole Diameter (mm)	Hole Depth (mm)	Base Thickness (mm)	Rec Torque (Nm)
RESSPIN08	M8	£220.32	10	80	110	10
RESSPIN10	M10	£236.52	12	90	120	29
RESSPIN12	M12	£273.24	14	110	140	40
RESSPIN16	M16	£374.76	18	125	160	80
RESSPIN20	M20	£540.00	25	170	220	120
RESSPIN24	M24	£739.80	28	210	260	180

Code	Tensile kN	Shear kN	Tensile kN	Shear kN	Tensile kN	Shear kN
M8	20	9	11.1	7.2	7.9	5.1
M10	30	14	16.7	11.2	11.9	8
M12	40	21	22.2	16.8	15.9	12
M16	50	39	27.8	31.2	19.8	22.3
M20	75	61	41.7	48.8	29.8	34.9
M24	90	88	50	70.4	35.7	50.3

Loads given are base material of strength C20/25 Concrete and for studs of steel Grade 5.8 or Grade 70 Stainless steel

### Loading times

Application Temperature	Curing time (mins)
30°C	20
20°C	40
10°C	120
0°C	600

### Shelf Life

Capsules should be stored in their original packaging in cool conditions (0~25°C) out of direct sunlight. When stored in this way the shelf life will be 12-18months from the date of manufacture.

All dimensions in mm, unless otherwise stated.