

High performance vinylester based styrene-free anchoring resin

PRODUCT

weberanc 535 VE is a two-part in one tube vinylester based styrene free anchoring system for solid and hollow substrates. It is specified for use to provide normal gelling times, in higher temperatures.

weberanc 535 VE is delivered through a mixing nozzle into the fixing hole. The cartridges are extruded using a standard dispenser or a silicone tool.

SCOPE OF USE

weberanc 535 VE is designed as a fast curing high strength resin to anchor threaded rods and rebar in concrete and masonry blocks. It can be used in dry and wet conditions.

weberanc 535 VE is also suitable for use in:

- Light weight concrete, perforated bricks...
- Fixing machines, plates...
- Steel construction
- Studs and other fixings
- Facades, window elements...
- Railings, handrails, cable trays...
- Street furniture

FEATURES

- Suitable for use in environments up to 45 °C
- Good bond strength with high load resistance
- Medium and Heavy-duty load applications
- Fast gelling and curing
- Economical fixing resin
- Good durability
- Styrene free with low odour
- Ideal for indoor and outdoor usage
- Chemical resistant
- Low VOC content



PACKAGING

Leb	Syria	Jordan	UAE	Qatar	Kuwait	KSA	Oman
-	-	-	300 ml	300 ml	300 ml	300 ml	300 ml

CHARACTERISTICS

Compressive strength ASTM D695	38 N/mm ²
Flexural strength ASTM D790	12 N/mm ²
Flexural modulus ASTM D790	3200 N/mm ²
Tensile strength ASTM D638	5 N/mm ²
VOC Content	A+ Rating

Typical Performance at Standard Embedment Depth in Solid Substrate

Size	Characteristic Resistance (kN)*		Recommended Load (kN)*		Spacing (mm)	Hole Diameter Drill (mm)	Embedment Depth (mm)
	Tension (Nrk)	Shear (Vrk)	Tension (Nrec)	Shear (Vrec)			
M8	19.0	9.0	9.1	5.1	160	10	80
M10	35.3	15.0	14.02	8.57	200	12	90
M12	41.4	21.0	19.7	12.0	240	14	110
M16	75.4	39.0	29.9	22.3	320	18	125
M20	122.8	61.0	48.75	34.9	400	22	170
M24	174.1	88.0	69.12	50.29	480	28	210

*All tests were performed using grade 5.8 grade studding and C20/25 dry concrete with temperature range 1 maximum long term / short term temperature +24/40°C. All data is based on correct installation – see instructions.

Typical Performance at Standard Embedment Depth in Hollow Wall

		M6	M8	M10	M12
Sleeve dimension (nylon or plastic)	mm	12 x 80		16 x 85	
Anchorage depth	mm	80	80	85	85
Drill diameter (hole diameter)	mm	12	12	16	16
Minimum wall thickness	mm	$h_{ef} + 5\text{mm}$			
Critical space distance parallel to horizontal joint	mm	250	250	250	250
Critical space distance perpendicular to horizontal joint	mm	120	120	120	120
Minimal space distance parallel to horizontal joint	mm	250			
Minimal space distance perpendicular to horizontal joint	mm	120			
Critical edge distance	mm	100	100	100	100
Minimal edge distance	mm	100			
Installation torque	Nm	2			
Characteristic tension load	kN	0.75	0.75	1.5	1.5
Recommended tension load	kN	0.21		0.43	
Characteristic shear load	kN	1.5	1.5	1.5	1.5
Recommended shear load	kN	0.43			

*Brick type and strength: hollow brick - compressive strength $\geq 6 \text{ Mpa}$

CURING TIME*

Concrete Temperature	Gel – Working Time	Minimum curing time in dry concrete	Minimum curing time in wet concrete
+5 °C	20 min	90 min	x2
+15 °C	15 min	60 min	x2
+25 °C	10 min	30 min	x2
+35 °C	8 min	20 min	x2
+45 °C	6 min	18 min	x2

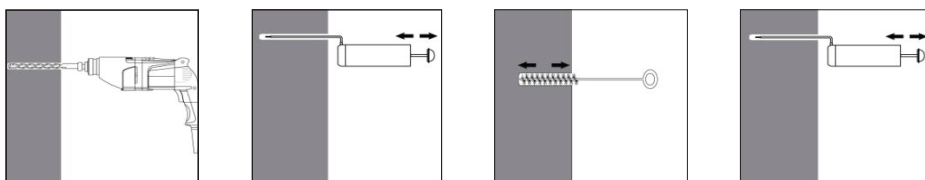
* Resin temperature must be at least +20°C

- Full cure 24 hours

- All specifications based on supplied mixer

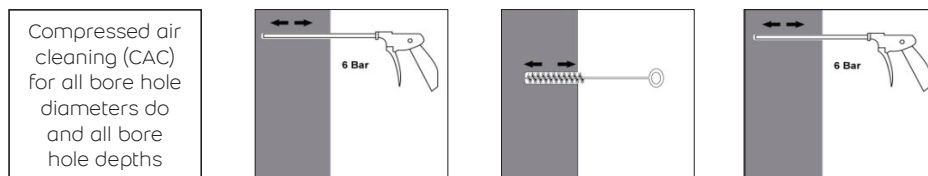
INSTRUCTIONS FOR USE

Solid Substrates

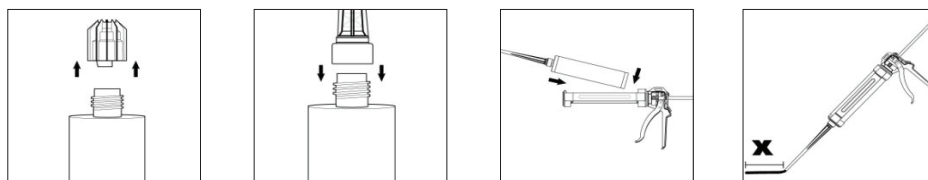


Drill hole in the substrate to the required embedment depth using the appropriately sized carbide drill bit. Bore hole cleaning Just before setting an anchor, the bore hole must be free of dust and debris. The manual pump shall be used for blowing out bore holes up to diameters $d_o \leq 24\text{mm}$ and embedment depths up to $h_{ef} \leq 10d$. Blow out at least 4 times from the back of the bore hole, using an extension if needed. Brush 4 times with the appropriate brush size by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. Blow out again with manual pump at least 4 times.

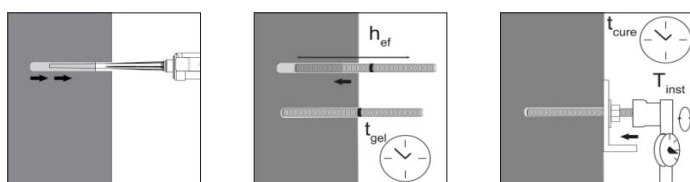
Compressed air cleaning (CAC) for all bore hole diameters do and all bore hole depths



Blow 2 times from the back of the hole (if needed with a nozzle extension) over the whole length with oil-free compressed air (min. 6 bar at 6 m³/h). Brush 2 times with the appropriate brush size by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. Blow out again with compressed air at least 2 times.

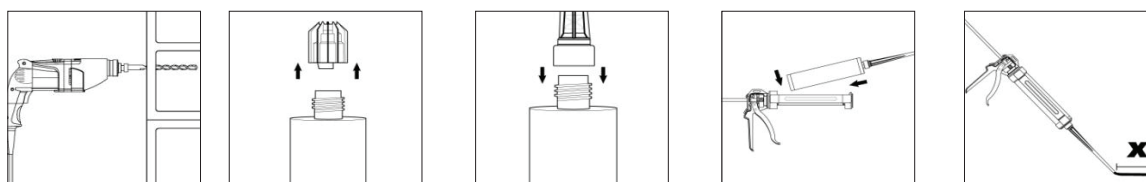


Remove the threaded cap from the cartridge. Tightly attach the mixing nozzle. Do not modify the mixer in any way. Make sure the mixing element is inside the mixer. Use only the supplied mixer. Insert the cartridge into the dispenser gun. Discard the initial trigger pulls of adhesive. Discard the first 10ml of resin.

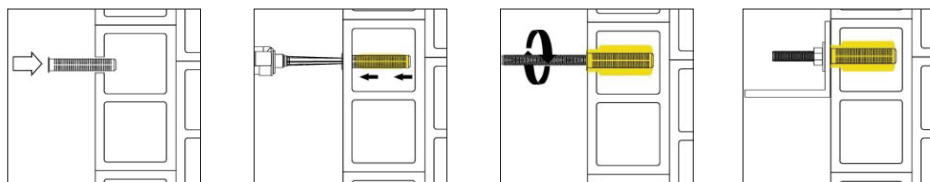


Inject the adhesive starting at the back of the hole, slowly withdrawing the mixer with each trigger pull. Fill holes approximately 2/3 full, to ensure that the annular gap between the anchor and the concrete is completely filled with adhesive along the embedment depth. Before use, verify that the threaded rod is dry and free of contaminants. Install the threaded rod to the required embedment depth during the open gel time t_{gel} has elapsed. The working time is given in table above. The anchor can be loaded after the required curing time (see table above).

Hollow Wall



Drill hole in the substrate to the required embedment depth using the appropriately sized carbide drill bit. Bore hole cleaning Just before setting an anchor, the bore hole must be free of dust and debris. Remove the threaded cap from the cartridge. Tightly attach the mixing nozzle. Do not modify the mixer in any way. Make sure the mixing element is inside the mixer. Use only the supplied mixer. Insert the cartridge into the dispenser gun. Discard the initial trigger pulls of adhesive. Discard the first 10ml of resin until an even colour is achieved.



Introduce the sleeve of suitable dimensions. Insert the nozzle to the end of the sleeve and inject the resin so long till the sleeve will fill into 100%. Insert the anchor, slowly with a slight twisting motion into the sleeve. Remove excess resin and leave the fixing until minimum curing (loading) times has elapsed.

CONSUMPTION

Typical Coverage at Standard Embedment Depth in Solid Substrate

Size	Hole Diameter Drill	Embedment Depth	Material Consumption per anchorage*	Number of anchorage by 300 ml cartridge*
	(mm)	(mm)	(ml)	
M8	10	80	3	100
M10	12	90	5	60
M12	14	110	6	50
M16	18	125	13	23
M20	24	170	24	13
M24	28	210	55	6

*the indicated values do not include any wastage (20 ml per 300 ml cartridge)

Typical Coverage at Standard Embedment Depth in Hollow Block

Size	Hole Diameter Drill	Embedment Depth	Material Consumption per anchorage*	Number of anchorage by 300 ml cartridge*
	(mm)	(mm)	(ml)	
M6	10	80	5	60
M8	12	90	13.1	22
M10	14	110	21.6	13
M12	18	125	21.6	13

*the indicated values do not include any wastage (20 ml per 300 ml cartridge)

STORAGE

Can be stored up to 12 months from manufacturing date, in cool, dry, well-ventilated area away from heat sources, at +5°C to + 25°C and out of direct sunlight.

SAFETY PRECAUTIONS

Application should be done in a ventilated area away from any heat source. Wear protective gear for hands and eyes and avoid breathing of vapor. If mixed resin comes into contact with the skin, it should be promptly removed before hardening, followed by thoroughly washing the skin with soap

and water. In case of heavy vapor inhalation, place affected person in an open-air area. In case of contact with eyes, wash thoroughly with clean water. If swallowed, do not induce vomiting. In all cases, seek medical attention. In case of fire, use CO2 foam to extinguish. Tightly seal containers when not in use, store them away from heat and carefully dispose empty ones.

DISCLAIMER

While the company guarantees its products against defective materials, the use and application of these products are

made without guarantee since the conditions of their application are beyond its control. It is recommended to verify with the company that the product is suitable for the intended use, and that this Data Sheet version is the latest one. The company may modify it without prior notice. Technical characteristics are listed for guidance only. For more information, please contact the company's office in your location.

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