BETA KİMYA SANAYİ ve TİCARET A.Ş.

TECHNICAL DATA SHEET
Apel Chemical Anchor

Release date: *20.07.2020*
Revision Date/No: *- / Rev.00*
TDS No: *TDS 158-EN*

1. PRODUCT DESCRIPTION

Trade Name: Apel chemical anchor.

Product Description: Two component, polyester based reactive chemical anchor.

2. TECHNICAL DATA

Mixed ratio	10/1

Cartridge Temperature	**Gel time**	**Curing time**
5 °C	12 min.	4 h.
20 °C	5 min.	2 h.
30 °C	3 min.	40 min.

PERFORMANCE DATA FOR STANDARD SOLID SURFACE APPLICATIONS

Design Parameters							
Type of Resine	**Concrete**		**M8**	**M10**	**M12**	**M16**	**M20**
Polyester	C 2 0/2 5	N Rk [kN]	11,4	1 7,4	24,2	2 7,1	4 5,6
		N Rd [kN]	6,3	9,6	13,5	15,1	25,4
Safety factor for tension loads 1,8 ace.to ETAG							
Polyester based resine	Steel quality 5.8	VRk [kN]	8,3	1 2'9	18,9	35,3	55,1
		VRd [kN]	5,3	8,3	12,1	22,6	35,3
		rec. torque	12,9	25,6	44,8	113,7	222,9
Polyesterbased resine	Steak quality A4	VRk [kN]	9,2	14,5	21,1	39,3	6113
		VRd [kN]	5,9	9,3	13,5	25,2	39,3
		rec . torque	12	23,9	41 '9	106,7	207,9

Safety factor fors hare loads 1,56 acc.to ETAG

RECOMMENDED LOADS							
Type of Resine	**Concrete**		**M 8**	**M 10**	**M 12**	**M 16**	**M 20**
Polyester based resine	C 2 0/2 5	Frec [kN]	4,5	6,9	9,6	10,8	1 8,1

INSTALLATION PARAMETERS							
Edge distance	C cr,N	[mm]	80	90	110	130	1 70
Min. Edge distance	Cmin	[mm]	40	50	60	70	90
Axial distance	S cr N	[mm]	160	180	220	250	3 40
Min. Axial distance	S min	[mm]	80	90	110	125	1 70
Anchorage depth	h ef	[mm]	80	90	110	125	1 70
Min. Part thickness	hmin	[mm]	130	140	160	1 75	220
Tread diameter	d	[mm]	8	10	12	16	20
Drill diameter	dB	[mm]	10	12	14	18	24
Hole diameter in part	dbau	[mm]	9	11	1 3,5	1 7,5	22
Tighthening Torque	Tinst.	[Nm]	10	20	40	60	120

PERFORMANCE DATE FOR HOLLOW BRICK APPLICATION

Recommended loads			**Standard Sleeves**				**Approved Sleeves**	
Malzeme CINSI	**Güç Sınıfı**		**M6**	**M8**	**M 10**	**M 12**	**M8**	**M 1 0**
Hollow Brick	Hlz 4	Frec. [kN]	0,3	0,3	0,3	0,3	0,3	0,3
	Hlz 6		0,4	0, 4	0,4	0,4	0,4	0,4
	Hlz 12		0,7	0,8	0,8	0,8	0,8	0,8
Sand-lime Hollow Brick	KSL 4	Frec. [kN]	0,3	0,4	0,4	0,4	0,4	0,4
	KSL 6		0,4	0,6	0,6	0,6	0,6	0,6
	KSL 12		0,7	0,8	0,8	0,8	0,8	0,8
Sand-lime Solid Brick	KS 12	Frec. [kN]	0,5	1J	1,7	1, 7	1,7	1,7
Solid Brick	Mz 12	Frec. [kN]	0,5	1,7	I,7	1, 7	1,7	1,7
Light Concrete Hollow Brick	Hbl 2	Frec. [kN]	0,3	0,3	0,3	0,3	-	-
	Hbl 4		0,5	0,6	0,6	0,6	-	-
Concrete Hollow Brick	Hbn 4	Frec. [kN]	0,5	0,6	0,6	0,6	-	-
Standard Sleeve	12.x50	[mm]	X					
	15x85			X	X	X		
	15 x130				X	X		
Approved Sleeve	SH 13x100	[mm]					X	
	SH 15x100							X

Energy of Break Test					
Age of sample at testing	Properties	Extreme value		Average value	Variation coefficient %
24 hours	Bending tensile[N/mm^2]	43,9	47,3	46,1	3,03
	Energy at break at maximum force in bending trial [Mm]	8,29	10,6	9,74	7
	Compression [N/mm^2]	78,8	86,7	82,8	3,78
	Energy at break at maximum force in compression trial [Nm]	169	196	176	6,14

DYNAMIC ELASTICITY MODULE TEST		
Samlpe	Raw density [Kg/dm3]	E dyn after 24 hours [N/mm2]
1	1,64	3100
2	1,63	3550
3	1,63	3300
Mean Value	1,63	3300

3. APPLICATIONS

Solid surface (stone, concrete etc.)

1. Drill the hole with percussion drill, clean it with airbrush.
2. Cut the end of dual cartridges, put on the mixer nose, install them to caulking gun
3. Discard a small amount that the first comes from the static mixer nose to assure the use of blended mortar.
4. Extrude the mortar into hole, starting from bottom to fill 3/2 of its volume.
5. Insert the fixing element rotating it clock wise.
6. The resin excess must come out.
7. Check the hardening time.
8. Install component apply torque
9. After use removes the mixer and close cartridge.

Hollow brick

1. Drill the hole without percussion drill, clean it with airbrush.
2. Cut the end of dual cartridges, put on the mixer nose, install them to caulking gun
3. Discard a small amount that the first comes from the static mixer nose to assure the use of blended mortar.
4. Insert perforated sleeve.
5. Extrude the mortar into perforated sleeve, starting from bottom to fill 3/2 of its volume.
6. Insert the fixing element rotating it clockwise.
7. The resin excess must come out.
8. Check the hardening time.
9. Install component apply torque.
10. After use removes the mixer and close cartridge.

4. INSTRUCTIONS

Chemical anchor use high mecanic resistance area especially steel dowels, solid brick, light concrete, concrete, granite, concrete hollow brick, sand-lime hollow brick connections. Moreover it is also used for anchor applications.

- Anchoring of rebars in preformed holes in concrete, subsrates both hollow and solid
- Fixing of anchoring bolts in Foundations of masonry
- Fixing of light systems
- Fixing of balcony and hand rails
- Fixing of gates, blinds, antennas and other domestic objects
- Fixing of air conditianing systems
- Fixing of GSM base station, satellite antenna and TV systems.

5. PACKAGING

Apel Chemical anchor cartridges of 345 ml (12 piece) ve 410 ml (12 piece).

6. STORAGE AND SHELF LIFE

24 Months in unopened packing in a cool, dry, storage place at temperatures between +5 °C and +25 °C

7. WARNINGS/ SAFETY PRECAUTIONS

Protect from sunlight and freezing .

Wear any liquid-tight rubber or vinyl gloves.

Consult Material Safety Data Sheet for further information.

Its must be using temperature +20 °C for the cartridge.