

TILES & ADHESIVE TESTING MACHINE

MODEL NO. EM-STB- 10 TO 100KN

Tiles | Adhesive | Concrete Block | Civil Apps

EQVIMECH has developed this test fixture for determining the adhesive strength of plaster or adhesives on tiles (for example, according to IS 15477: 2019 & EN 1348). Adhesion tests at an angle of 90° are possible, while several tiles can be bonded to the concrete slab simultaneously and pulled off one after the other through simple position changes. EQVIMECH provides other solutions for tests on tiles, such as the 3-point flexure test and determination of shear strength according to **IS 15477 | IS 13630 | IS 516**

To determines the flexural strength of concrete using a simple beam with third-point loading. Results are reported as the modulus of rupture (MOR), which is the flexural strength of the concrete sample just before it yields.

FRC offers several advantages over rebar or wire mesh reinforced concrete including increased crack resistance, ductility, energy absorption, impact resistance and residual strength.

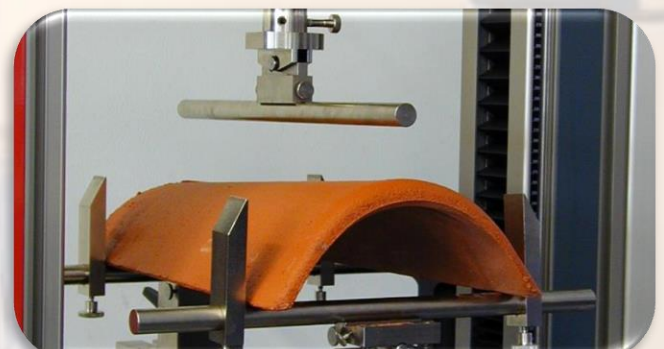
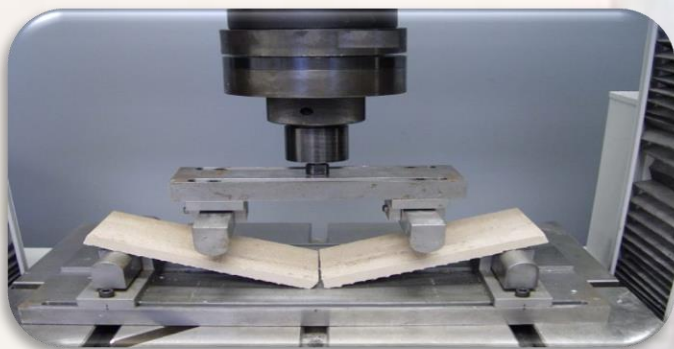
Testing Performed

- Pull Out Strength of 50x50mm Tiles from Tile Adhesive as per IS 15477.
- Shear Strength Testing 100x100mm for Tile Adhesive.
- Determination of Deformity.
- Modulus of Rupture for Ceramic Tiles.
- Concrete Beam Compression & Flexural limited to 50kN
- Briquettes Tensile Test as per IS 9162 & BS 6319



Calculations: (Software interface)

- Tensile Adhesive Strength
- Modulus of Rupture
- Shear Strength
- Deformation at Load
- Stress vs Strain
- Load at Peak
- Deflection at Peak
- Strength at Peak
- Strength Ratio etc. (as per customer requirement)



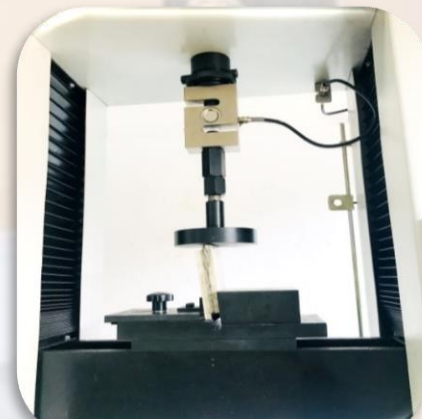
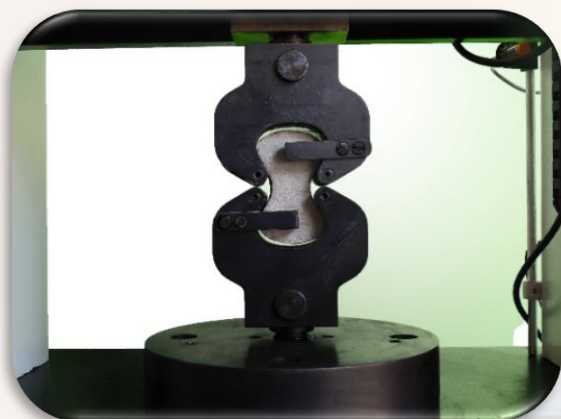
Recommended Equipment:

Testing Equipment	• Model No. EM -STB– 10 to 100 kN
Testing Standards	• IS 15477
	• IS 13630
	• ASTM C 1027
	• ASTM C 373
	• IS 1443
	• ISO 10545
Accessories	• Multiple Load cells



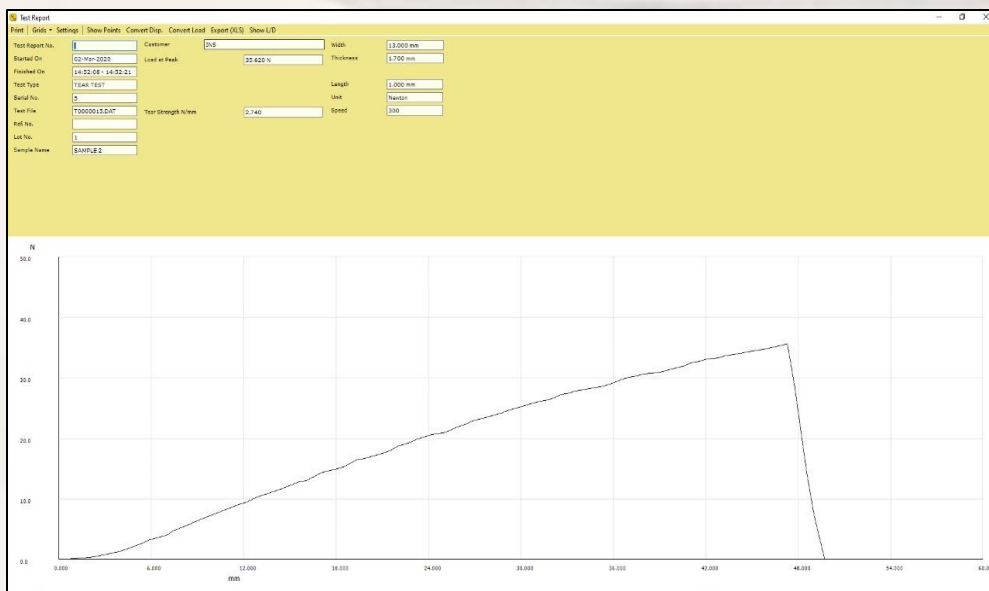
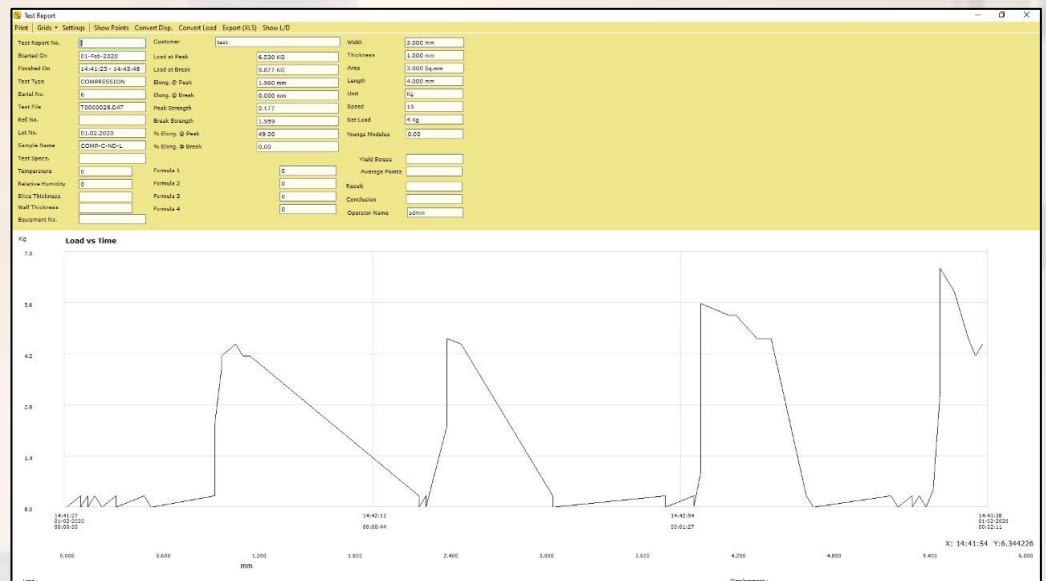
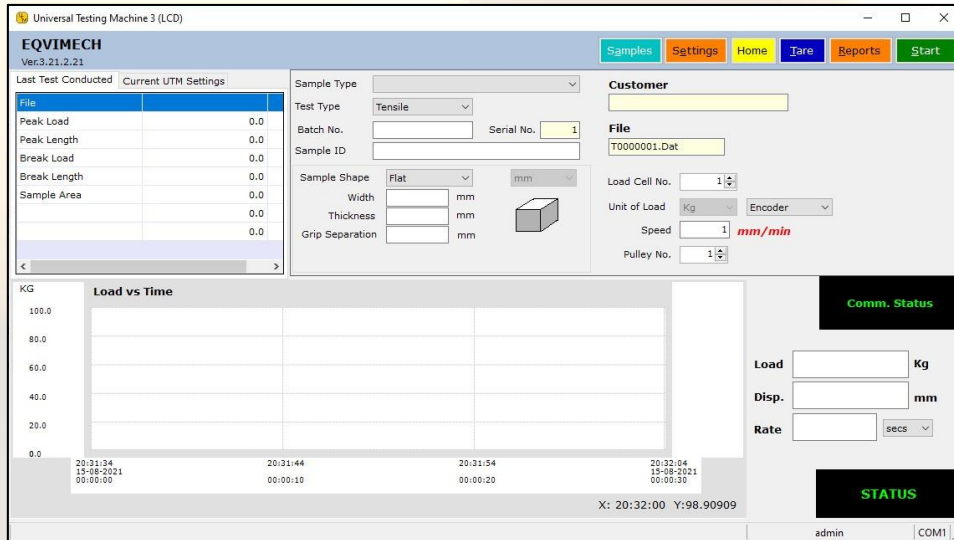
Technical Specification:

Capacity	10 kN to 100 kN
Load cells available	1kN to 100kN (100kg – 10000kg)
Maximum crosshead travel	1000 mm
Testing Mode	Strain Rate & Load Rate
Strain Rate	0.1-500mm/min
Load Rate	10-1000 [N/sec N/min]
Frame stiffness	10kN/mm to 200kN/mm (as per model)
Dimensions (H × W × D)	1800 mm × 1200 mm × 450 mm
Gross Weight (approx.)	700 - 800 kg (as per model)
Display	Graphical with test data output through inbuilt software
Power	220 V, Single phase, 50 Hz
Accuracy	± 0.5 % at 2 to 100 % Full Load
Grip to Grip Suspension	Min 25 mm and Max.900 mm (applicable only with vice type standard grip)
Digital Load Suspension	HMI Touch Screen Controls & Display
Drive Mechanism	Variable Frequency Drive
Safety	Yes
Grippers	Vice Type (Screw Side Action Tensile Grips) Wedge Type Roller Type Compression Plates 3 – Point Bend Test/ Flexural Test
Communication Converter	RS 232
Material	Adhesive, Concrete, Marble/ Tiles, Rod, Pipe
Finish	Power coated / Zinc plating for corrosion resistant finish



SOFTWARE APPLICATION

Compatable with all Microsoft Operating System: Windows 7,10.



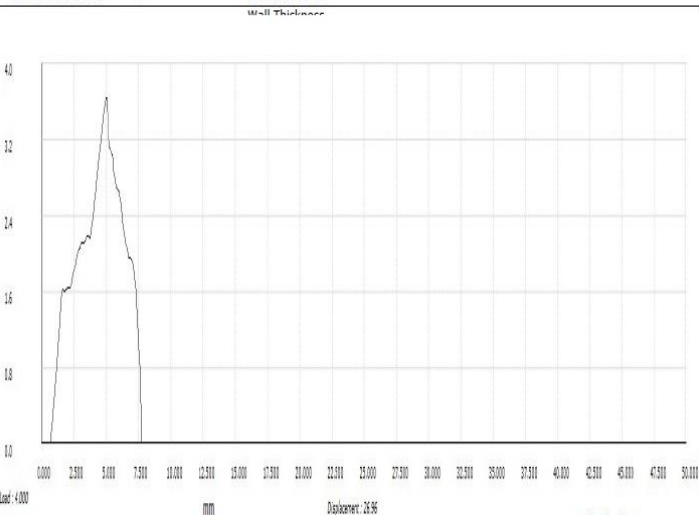
Tests Conducted											
From	23-01-2019 13:14	Tabular Report	Graph (L/D)	Graph (SS)	Graph (Time)	Result		Result			
To	30-05-2020 13:14	Raw Data	Delete	Conv. Load	Conv. Disp.	Sample Types					
☐ Test File	Sample ID	Batch No.	Serial #	Unit	Result	Started On	Finished On	Company	Type of Sample	Operator	Test Type
☐ T0000001.Dat	SV MOUNT 1	29022020	1	Kg / mm	Fail	29-Feb-2020 13:41:41	13:47:31	test	SV Mount	rtc	Compression
☐ T0000003.Dat	TEST	29022020	2	Kg / mm		29-Feb-2020 13:53:04	14:29:55	test	SV Mount	rtc	Compression
☐ T0000003.Dat	TEST	29022020	3	Kg / mm		29-Feb-2020 14:59:20	15:01:21	test	SV Mount	rtc	Compression
☐ T0000004.Dat	RTC001	29022020	4	Kg / mm		29-Feb-2020 15:08:05	15:10:17	test	SV Mount	rtc	Compression
☐ T0000005.Dat	RTC002	29022020	5	Kg / mm		29-Feb-2020 15:11:29	15:14:58	test	SV Mount	rtc	Compression
☐ T0000006.Dat	RTC003	29022020	6	Kg / mm		29-Feb-2020 15:26:21	15:29:43	test	SV Mount	rtc	Compression
☐ T0000007.Dat	SV MOUNT 2	29022020	7	Kg / mm	ok	29-Feb-2020 15:56:21	16:01:15	test	SV Mount 2	rtc	Compression
☐ T0000008.Dat	RTC006	29022020	8	Kg / mm	ok	29-Feb-2020 16:05:18	16:07:21	test	SV Mount 2	rtc	Compression
☐ T0000009.Dat	TEST	29022020	9	Kg / mm	ok	29-Feb-2020 16:10:00	16:12:15	test	SV Mount 2	rtc	Compression
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☐ T0000011.Dat	B7	1	1	Kg / mm	fail	02-Mar-2020 12:32:08	12:35:26	INS	akcc 400 m	rtc	Compression
☐ T0000012.Dat	B7-2	1	2	Kg / mm	fail	02-Mar-2020 12:41:24	12:44:41	INS	akcc 400 m	rtc	Compression
☐ T0000013.Dat	DUMBBELL	1	3	N / mm		02-Mar-2020 13:33:01	13:33:25	INS	dumbbell	rtc	
☐ T0000014.Dat	TEST	1	4	N / mm		02-Mar-2020 13:40:19	13:48:42	INS	tear dumbbell	rtc	Tear Test
☒ T0000015.Dat	SAMPLE 2	1	5	N / mm		02-Mar-2020 14:52:06	14:52:21	INS	tear dumbbell	rtc	Tear Test
☐ T0000016.Dat	TEST	1	6	N / mm		02-Mar-2020 15:17:55	15:18:15	INS	Rubber dumb...	rtc	Tensile
☐ T0000017.Dat	A-1	1	7	Kg / mm	ok	02-Mar-2020 15:43:50	15:45:42	INS vibhuti	AKCC 120 M	rtc	Compression
☐ T0000018.Dat	4500	1	8	Kg / mm		02-Mar-2020 16:06:12	16:07:04	test	SV Mount 4500	rtc	Compression
☐ T0000019.Dat	4500	1	9	Kg / mm		02-Mar-2020 16:09:24	16:10:23	test	SV Mount 4500	rtc	Compression

Test Report

EQVIMECH PVT LTD

D-22, Balaji Indl Park, Taloja MIDC, Navi Mumbai-410208

Test Report No.	Customer		
Started On	28-Feb-2021	Load at Peak	3.640 N
Test Period	18.28.19 - 18.28.31	Load at Break	0.730 N
Test Type	COMPRESSION	Elong. @ Peak	5.030 mm
Serial No.	35	Elong. @ Break	7.680 mm
Test File	T0000056.DAT	Peak Strength	0.0143 MPa
Lot No.	4321	Break Strength	0.0029 MPa
Sample Name	22G WITHOUT OIL SAMPLE 1		
Ref. No.		% Elong. @ Peak	50.30
Width	18.000 mm	% Elong. @ Break	76.80
Thickness	0.000 mm	Formula 1	0
Length	10.000 mm	Formula 2	0
Area	254.340 Sq.mm	Formula 3	0
Speed	50.0 mm/min	Formula 4	0
Test Specs.		Set Load	
Equipment No.		Youngs Modulus	0.00 MPa
Operator Name	admin		
Temperature	0	Yield Stress	
Relative Humidity	0	Average Points	

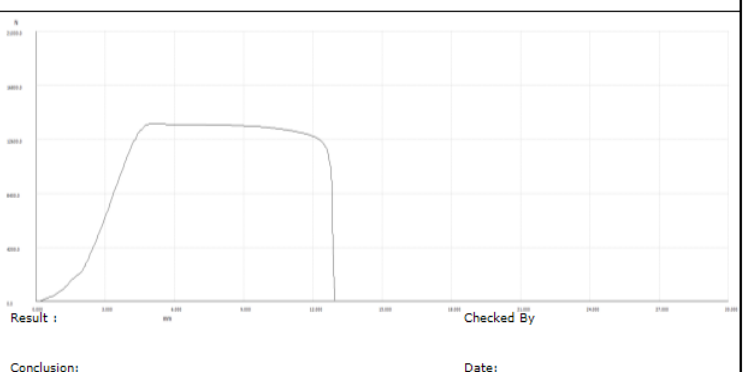


Test Report

Veermata Jijabai Technological Institute

H R Mahajani Road, Matunga Mumbai Maharashtra 400019

Test Report No.	Customer		
Started On	24-Jul-2021	Load at Peak	13799.459 N
Test Period	14:48:32 - 14:49:06	Load at Break	12419.513 N
Test Type	TENSILE	Elong. @ Peak	5.030 mm
Serial No.	8	Elong. @ Break	12.940 mm
Test File	T0000008.DAT	Peak Strength	375.0 MPa
Ref. No.		Break Strength	337.5 MPa
Lot No.	EST	% Elong. @ Peak	503.00
Sample Name	HG	% Elong. @ Break	1294.00
Width	23.000 mm	Formula 1	0
Thickness	1.600 mm	Formula 2	0
Length	1.000 mm	Formula 3	0
Area	36.800 Sq.mm	Formula 4	0
Speed	25	Set Load	
Test Specs.		Youngs Modulus	0.00 MPa
Equipment No.	UTM-12-50KN	0.00 - 0.00	
Operator Name	admin	Yield Stress	
Temperature	0	Average Points	
Relative Humidity	0		





GRIPS AS PER SAMPLE MATERIAL



- **Vice Type Grip (Screw Side Action Tensile Grips):**
Rubber, Plastic, Metal etc.



- **Wedge Type Grip**
Rubber, Plastic, Metal, Fabric and More.



- **Roller Type Grip**
Rubber, Plastic, Fabric and More.



- **Compression Plate**
Spring, Rubber, Plastic, Cement Cube, Metal, Food, Tablet (medicine) Pipe, Soil and More.



- **Pneumatic Grip**
Rubber, Plastic, Metal, Fabric and More.



- **Hydraulic Grip**
Metal, Pipe, Rod And More.



- **3 – Point Bend Test Grip**
Plastic, Tile, Wire, Concrete, Wood, Composite Material Pipe, Metal, Fibre, Cardboard, Glass And More.



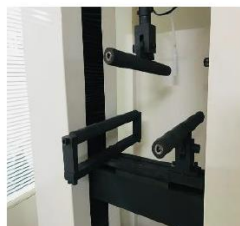
- **Pull – Off Adhesion Test Grip**
Tile, Cement, Paint, Coating Material, Composite Material And More.



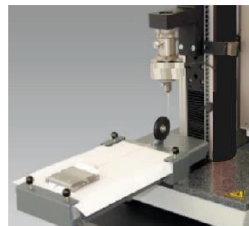
- **Shear Adhesion Test Grip**
Tile, Cement, Composite Material And More.



- **Peel Adhesion Test Grip**
Paper, Fabric, Plastic, Film, Tape And More.



- **MOR(Modulus of Rupture)**
Tiles, Glass, Marble, Acrylic And More.



- **Coefficient of Friction Test Grip**
Paper, Fabric, Plastic, Film, Tape.



- **Burst or Puncture**
Paper, Fabric, Plastic, Film And More.



- **Webbing Tensile Grips**
Textile Webbing, Cargo Straps, And Seat Belt Material