



# TEST CERTIFICATE

Ref. No. : CTS/H/ 15-55872L04

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In Pursuance to an order for inspection given to us by,

**APPLICANT** : **ALVAN RESIN AND PAINT PRODUCTION**  
**HEAD OFFICE: NO.23, LOTFI ST., HAFT-E-TIR SQ, TEHRAN-IRAN**  
**TEL:021-88847444 FAX:021-88303089**

**INSPECTION PLACE** : **KM21 KARAJ ROAD, TEHRAN, IRAN.**

**INSPECTION DATE** : **17. DEC. 2014**

**COUNTRY OF ORIGIN** : **IRAN**

Our surveyor attended the above mentioned places and dates, in order to carry out the required inspection.

Our findings were as follows:

- 1) **Material inspected:**  
Mega Stone (Code ALCO-2235)
- 2) **Scope of inspection:**
  - Sampling (Based on AQL-ISO 2859-1:1989)
  - Dispatch Samples (No of samples:1 A type+1 B type)
- 3) **Applicable documents:**
  - AQL-ISO 2859-1:1989
  - TDS-Mega stone Specification.
- 4) **Instruments used:**
  - N/A
- 5) **Inspection Performed:**
  - The inspection was carried out as below:
- 6) **Sampling:**
  - Sampling was carried out of Mega Stone (produced by Alvan Resin and Paint Production) at the packaging stage.
- 7) **Dispatch Samples:**

Samples were taken randomly in the separate packet. (No of samples: 1 A type+1 B type) and sent to the accredited laboratory, result by third party laboratory is as below:
- 8) **Test Report:**

According to the performed sampling, samples were drawn and sealed samples sent to the accredited subcontracted local laboratory in Tehran which has ISO17025 Certificate in general scope.  
The test report is quoted, un-quoted as following:

**Quote:**

**Linear Coefficient of Shrinkage Test**  
According to: ASTM C881/C881M-13



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### Results

- Linear coefficient of shrinkage =0.003
- Acceptance Criteria=0.005

### Notes

- Composition:50%A & 50%B

### Consistency

According to: ASTM C881/C881M-13

### Results

- Consistency <1mm

### Notes

- Composition:50%A & 50%B
- The test was done on 3 specimens
- Acceptance Criteria=Max.6mm

### Water Absorption

According to: ASTM C881/C881M-13, ASTM D 570-98(2010)

### Description

- After 14 days cure at 23°C, the test specimens were kept at 110C for 1 hour & then in water at room temperature for 24 hours.

### Results

- Water absorption of the sample in equal to 0.12% (w.w)

### Notes

- The test was done on 3 specimens & average of results were reported
- Composition: 50% A & 50% B
- Acceptance Criteria: Max.1%

### Compression Test

According to: ASTM C881/C881M-13, ASTM D 695-10

### Results

- Results of compression test after 7 days cure at 23°C

Row	Dimension (mm*mm)	Initial Area (33)	Thickness (mm)	Speed (mm/min)	Max.Force (kN)	Compressive Strength(MPa)	Compressive Modulus (MPa)
1	13.03*13.20	172.00	26.92	1.3	12.56	73	2033
2	13.3.*13.15	174.90	26.60	1.3	12.35	71	2116
3	13.25*13.20	174.90	26.80	1.3	13.03	75	2045
<b>Average</b>						73	2065
<b>Acceptance Criteria</b>						Min.70	Min.1400



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**Notes**

- Composition: 50% A & 50% B

**Bond Strength Test**

According to: ASTM C881/C881M-13, ASTM C882/C882M-12

**Results**

- Results of Bond Strength after 2 days (Moist Cure) at 23°C

NO	Bonding Area	Bond Stress (kN)	Bond Strength (MPa)
1	8693	65.69	7.55
2	8635	62.17	7.20
3	8685	63.83	7.35
Average			7.37
Acceptance Criteria			Min.7

- Results of Bond Strength after 14 days (Moist Cure) at 23°C

NO	Bonding Area	Bond Stress (kN)	Bond Strength (MPa)
1	8667	91.88	10.60
2	8662	90.95	10.50
3	8648	87.43	10.11
Average			10.40
Acceptance Criteria			Min.10

**Notes**

- Composition: 50% A & 50%B
- Number and total area of voids in the bond: 0
- Type and position of the facture: in the interface between bonding material and mortar

**Gel Time Test**

According to: ASTM C881/C881M-13

**Result**

- Gel time: 38min

**Notes**

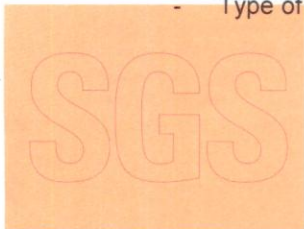
- Acceptance Criteria: Min. 30min
- Composition: 50% A & 50%B

**Heat Deflection Temperature (HDT) Test**

According to: ASTM C881/C881M-13

**Test Parameters**

- Immersion medium: Silicon Oil
- Temperature at the start of the test: 23C
- Type of apparatus: Automatic



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## Results

- Results of HDT test after 7 days (Moist Cure) at 23°C:

Row	Dimension (mm*mm)	Maximum Fiber Stress (MPa)	Deflection of sample (mm)	Heating rate (C/min)	HDT °C
1	4.82*12.25	0.455	0.25	2	52.40
2	4.98*12.20	0.455	0.25	2	52.10
<b>Average</b>					52.25
<b>Acceptance Criteria</b>					Min.50

## Notes

- After removal, no unusual change (twisting, no uniform bending, discoloration, swelling ...) was observed on the specimens.
- Composition: 50% A & 50%B

## Conclusion:

- According to the result and conducted tests, the specimen conforms to ASTM C881/C881M-13.

## Un Quote:

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Signed and dated by SGS IRAN Ltd.: 2015/FEB/09

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