

**PHYSICAL TESTING ANALYSIS REPORT**

**Description:** Transverse Strength Before & After Freeze Thaw Testing

**Test Method:** BS EN 492

**Lucideon Reference:** (181364)-17852

**Client:** Greys Artstone Ltd  
Burdwell Works New Mill Road  
Brockholes  
Holmfirth  
Huddersfield  
West Yorkshire  
HD9 7AZ

**For the Attention of:** Mr. Lee Johnson

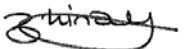
**Date Logged:** 12-Mar-2018

**Date of Tests:** 25-Apr-2018 to 27-Jun-2018

**Report Date:** 28-Jun-2018

**Purchase Order No.:** Credit Card

Please find attached the results for the sample(s) recently submitted for analysis.



**Miss Zoe Kinally**  
**Manager**

**Lucideon Reference:** (181364)-17852  
**Customer Reference:** Reproduction Welsh Slate with 100% Welsh Slate Aggregate  
**Description:** Reproduction Welsh Slate with 100% Welsh Slate Aggregate



**DETERMINATION OF BENDING MOMENT OF RUPTURE BEFORE AND AFTER FREEZE THAW  
 FIBRE-CEMENT SLATES AND FITTINGS (BS EN 492: 2012+A1: 2016)**

**BEFORE FREEZE THAW**

Specimen Number	Mean Bending Moment of Rupture of Two Directions (Nm/m)	Weaker Bending Moment of Rupture (Nm/m)
1	113	108
2	122	116
3	147	138
4	135	133
5	144	128
6	152	143
7	132	119
8	114	113
9	133	116
10	109	103
<b>Mean</b>	<b>130</b>	<b>122</b>

**AFTER FREEZE THAW**

Specimen Number	Mean Bending Moment of Rupture of Two Directions (Nm/m)	Weaker Bending Moment of Rupture (Nm/m)
1	157	149
2	177	145
3	191	185
4	200	163
5	195	184
6	211	193
7	155	130
8	158	156
9	198	196
10	162	157
<b>Mean</b>	<b>180</b>	<b>166</b>

**INTERPRETATIONS OF COMPLIANCE**

Specimen Number	Individual Ratio of Bending Moments, $R_i$
1	1.39
2	1.45
3	1.30
4	1.48
5	1.35
6	1.39
7	1.18
8	1.39
9	1.49
10	1.49
<b>Mean, R</b>	1.39
<b>Standard Deviation, s</b>	0.09
<b><math>R_L</math></b>	1.33

To satisfy the requirements of BS EN 492 for Durability and Freeze-thaw, section 5.4.5:  $R_L \geq 0.75$ . The samples tested meet these requirements.

**END OF TEST REPORT**