

Loading Test Report

Approval office for construction products Structural Testing Office Fire Engineering Department Date: Business sign: 2017 Sep 18 115-1.15.1-45/10

Approval Number:

T-17-187659

Applicant:

Contruss engineering company

4500 Cote-des-Neiges Rd, Westmount,

QC H3V 1E6, Montreal, Canada

Subject of approval:

Loading test report of Contruss permanent filler

The above-mentioned approval subject is hereby loading test report. This test report comprises 6 pages.





T-17-187659

Page 2 of 6 | 2017 Sep 18

Test Report

Sample code: S-SE-***	Request number: -	Sample receipt date:		
		2017 Sep 2		
Sample name: Permanent	Requested test: Loading test	Financial approval date: -		
polystyrene	filler			
Client name: Contruss	Standard and test method:	Test implementation date:		
engineering company	Loading method of permanent voided slabs filler according to CIBmt criteria	2017 Sep 10		
Client address and phone: Contruss engineering company 4500 Cote-des-Neiges Rd, Westmount, QC H3V 1E6, Montreal, Canada Phone: (+1) 514 2246328				
Environmental conditions within the laboratory: Normal conditions				
Humidity: Normal humidity of environment		Temperature: 35°C		
It is certified that the requested test/tests on sample/samples was implemented according to the mentioned test method and following inclusions are derived:				
Test conclusions:				
Refer to 4 th paragraph.				
Total report is attached on 6 pages.				
Deviation of test procedure:				

- The conclusions are related to the sample tests.
- This report is not allowed to published without written permission of the laboratory unless presenting completely.



T-17-187659

Page 3 of 6 | 2017 Sep 18

1- Introduction:

This report is related to loading test of permanent fillers that are practiced in voided slab with perpendicular ribs. The test has been implemented in three positions of middle, edge and corner on the filler proposed by Contruss engineering group.

2- Test method:

Loads are applied in three positions of middle, edge and corner on the fillers in this test. The area subjected to applied load is 8*8 cm. The load level is as much as 150 kg. Permanent deformation or fracture under the applied load is not permissible in the filler, trays and piles.



Figure 1. Locations of applied load



Figure 2. load applying on the center of filler



T-17-187659

Page 4 of 6 | 2017 Sep 18

3- Sample specifications:

Three filler samples were presented to the CIBmt by the applicant. In addition, a polystyrene block sample has been received separately for density measurement. The fillers are made of polystyrene and also the upper and lower trays and pile are made of polypropylene. The polystyrene block dimensions are 55*55*20 cm and trays dimensions are 45*45 cm. Density of the expanded polystyrene used in the fillers was measured 8 kg/m³.



Figure 3. Weighing polystyrene block to measure density

Canadian Institute of Building Material and Technology

Loading test report T-17-187659

Page 5 of 6 | 2017 Sep 18



Figure 4. Side view of the filler

4- Test conclusions:

By applying load up to 150 kg, observations illustrated that none of the fillers are fractured, and also there is no permanent deformation in the fillers and no deviation in the piles. Due to compressibility of polystyrene, localized permanent deformation was observed in the location of applied load and the amount is presented in the following table.

	Location of applied load on the filler	Amount of localized permanent deformation (mm)
1	Middle	12.65
2	Edge	8.46
3	Corner	4.15



T-17-187659

Page 6 of 6 | 2017 Sep 18



Figure 5. localized deformation under location of load

5- Concluding:

Based on the conclusions and according to acceptable criteria by the CIBmt, the filler samples have enough strength to bear loads applied by passing of workers during construction of voided slab ceiling with perpendicular ribs. Note that the conclusions are related to the samples and the product or a special production line is not considered, meanwhile it will be generalized to the product.