UNIVERSITÀ DEGLI STUDI DI TRENTO
DEPARTMENT OF INDUSTRIAL ENGINEERING
Via Sommarive 9, 38123 Trento, ITALY

Test report: Uptec Profilitec Trento, February 25th 2019

Applicant:	Profilitec S.p.A.
Application:	Specimen received at 28/01/2019
Material:	Modular pedestals (SUPAS4-508/538) made of PP / 15% calcium carbonate.
Required test:	Uniaxial compression test at constant speed and measurement of the compression load of the specimen and the displacement of the testing machine's crossbar at the break of the specimen. Moreover, the stiffness of the specimen was measured in the linear part of the load-displacement curve.
Testing method:	Compression tests were performed on 3 specimens for each sample. The components of the pedestal had been assembled, the height of the specimen was regulated according to Table 1 and the 4 tabs on top of the pedestal were removed before the test. Specimens were placed on an aluminum plate provided by Profilitec S.p.A. Two types of plates were employed: one flat and one with a tilt of 5%. Two screws had been used for the alignment of the pedestal inside the machine avoiding any possible misalignments. The upper plate was a circular and flat one provided by Instron. An electro-mechanical testing machine, Instron 5969, was employed to perform uniaxial compression tests under displacement control. Load was applied with a constant displacement rate of 1.67 10^{-3} m/s. Test was stopped when a sharp load drop was measured that indicated the breakage of the pedestal. A load cell with a load capacity of 50 kN was employed to measure and record the force during the test. Stiffness of the specimens was calculated in the linear part of the load-displacement curve, in particular, it was taken in account the part of the curve between 2.5 kN and 5 kN. Test activities were carried out on February 15th, 2019. Tests were done at 21°C and a humidity level of 20%.

Table 1. Sample identification.

The executor of the test
ing. Daniele Rigotti

The responsible for the laboratory
prof. Alessandro Pegoretti

Test	Model	N° tests	H (mm - inches)	Head	Plate	T (°C)	Speed (mm/min)
C17	SUPAS4-508/538	3	538 – 211-13⁄16	Loose	Tilted	21	100

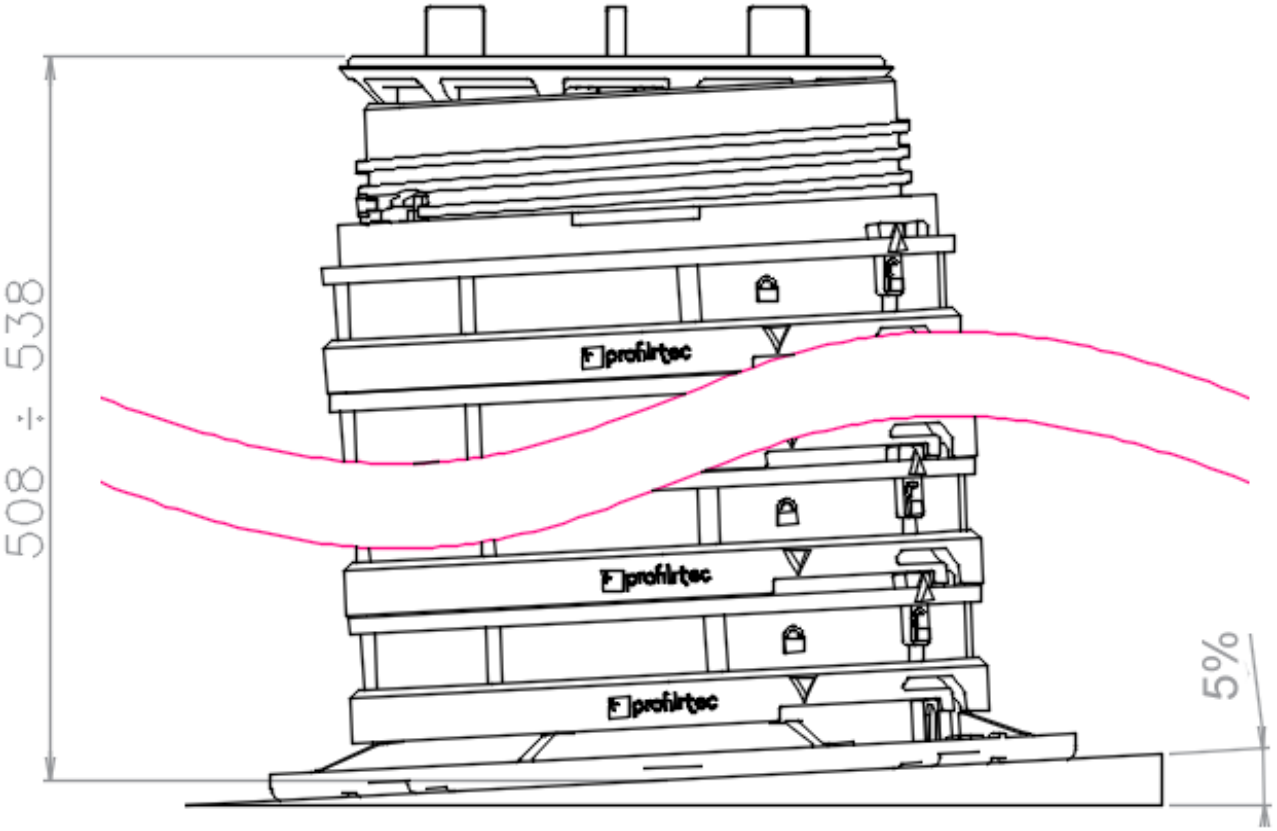

Figure 1. Specimen configuration for C17.

Test results:

Table 2. Results for sample C17.

Specimen	Stiffness (2.5-5kN) kN/mm	Load max (kN)	Load max (lbF)	Displacement at load max (mm)
C17_1	1.91 ± 0.02	14.62	3286.71	10.47
C17_2	1.99 ± 0.02	12.82	2882.05	9.20
C17_3	2.02 ± 0.02	13.59	3055.15	10.12
Mean	1.98 ± 0.05	13.67 ± 0.90	3073.14 ± 202.33	9.93 ± 0.65

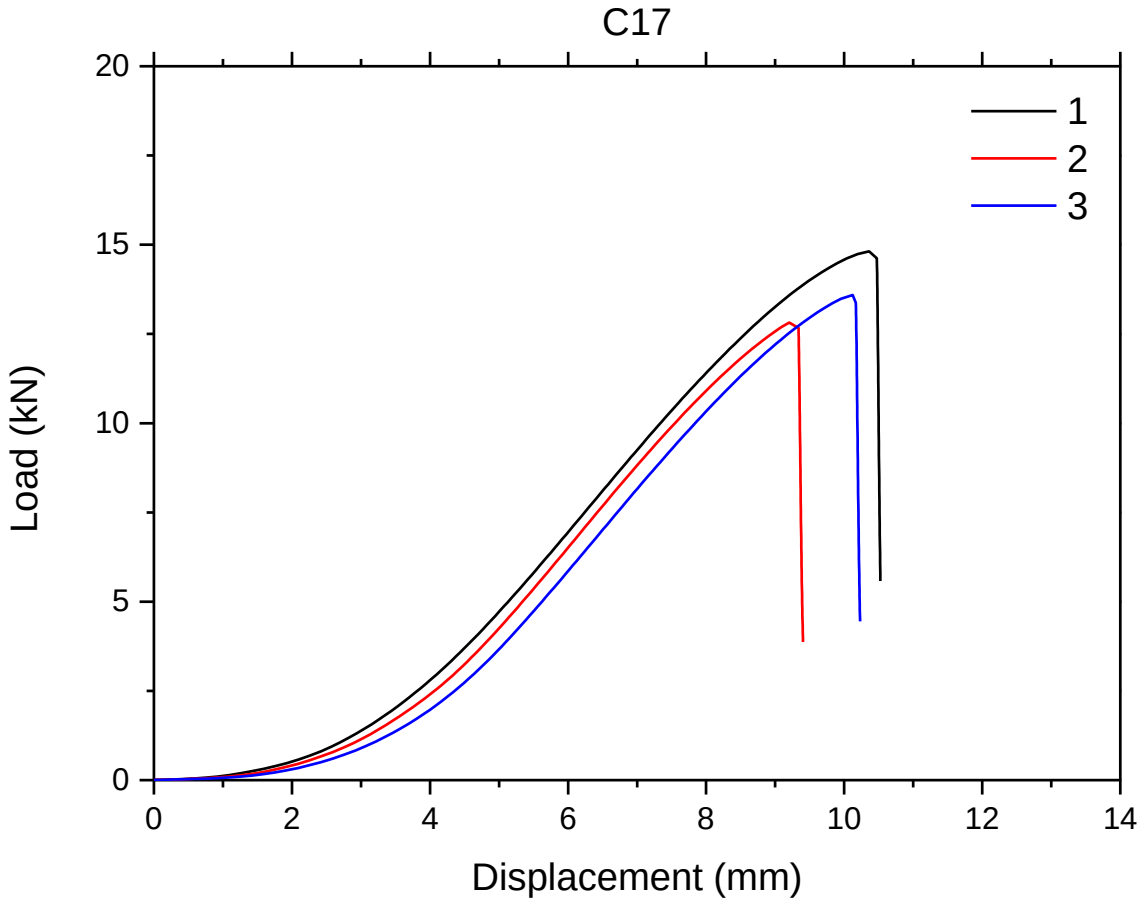

Figure 2. Load - displacement curves for sample C17.