Test Report

REPORT NUMBER: 287740-3

DANISH TECHNOLOGICAL INSTITUTE

#Teknologiparken
Kongsvang Allé 29
DK-8000 Aarhus C
+45 72 20 20 00
Info@teknologisk.dk
www.teknologisk.dk#

Init: MPJ/OTHE
Order No.: 287740
Encl.:0

Assignor:	Polygroup A/S Vestermarksvej 5 6630 Rødding
Item:	Wedges made of plastic material.
Sampling:	The assignor confirms having drawn the sample. The sample was forwarded by the assignor and received at Danish Technological Institute on 08-11-2024.
Period:	Testing took place from 02-12-24 till 17-12-24.
Method:	The test method is described in the report.
Test result:	See following page(s) for full result overview.
Remarks:	Report 287740-3 is a supplement to Report 287740-1. This report has been issued upon request to separate the different tests into individual reports.
Terms:	This analysis/test was conducted in accordance with international requirements (ISO/IEC 17025:2017) and in accordance with the General Terms and Conditions of Danish Technological Institute. The test results solely apply to the tested item. This analysis report/test report may be quoted in extract only if Danish Technological Institute has granted its written consent.
Place:	Danish Technological Institute, Industrial Materials Technology
Signature:	This document is only valid with a digital signature from Danish Technological Institute. The date of issue appears from the digital signature. Approved and signed by:

Michael Perolle Jensen
Bsc. Mech. Eng.
Business Manager

DIGITALLY SIGNED DOCUMENT
11 June 2025
DANISH TECHNOLOGICAL INSTITUTE

DANISH TECHNOLOGICAL INSTITUTE

Scope

The purpose of this test is to determine the displacement of plastic wedge specimens during compression under loads ranging from 0 kN to 250 kN.

Specimen

Test specimens consist of plastic wedges shown in Figure 1.

Figure 1. Specimens as received.

Table 1. Specimen ID.

DTI mark	Color
287740 – A1	Gray
287740 – A2	
287740 – A3	
287740 – A4	
287740 – A5	
287740 – A6	
287740 – A7	
287740 – A8	
287740 – A9	
287740 – A10	
287740 – A11	
287740 – A12	
287740 – A13	
287740 – A14	
287740 – A15	

DANISH TECHNOLOGICAL INSTITUTE

Test procedure

Each test was conducted by placing a plastic wedge in the testing machine, with a second wedge positioned inverted on top of the first. Metal plates with a total weight of 18.43 kg were placed above the setup to ensure even pressure distribution across the top surface of the wedge. The compression force was then applied to the inverted wedge using an Instron 250 kN Universal Testing Machine (ID: 158120), calibrated to class 1 standards. The complete setup is shown in Figure 2.

Figure 2 - Test setup.

DANISH TECHNOLOGICAL INSTITUTE

Results

The maximum load and the compressive displacement for each specimen, excluding any displacement of ejector pins resulting from injection molding, are specified in Table 2.

Table 2 - Results.

DTI mark	Max load [kN]	Compressive displacement of wedges[mm]	Load from metal plates [N]
287740 – A1	249.9	3.6	
287740 – A2	249.9	4.5	
287740 – A3	250.0	4.0	
287740 – A4	249.9	3.8	
287740 – A5	249.9	3.8	
287740 – A6	249.9	3.8	
287740 – A7	250.0	3.5	
287740 – A8	249.9	3.5	180.8
287740 – A9	249.9	4.0	
287740 – A10	250.0	3.5	
287740 – A11	250.0	3.7	
287740 – A12	250.0	4.5	
287740 – A13	249.8	3.6	
287740 – A14	250.0	3.4	
287740 – A15	250.0	4.2	
Average	249.9	3.8	

DANISH TECHNOLOGICAL INSTITUTE

Graphs

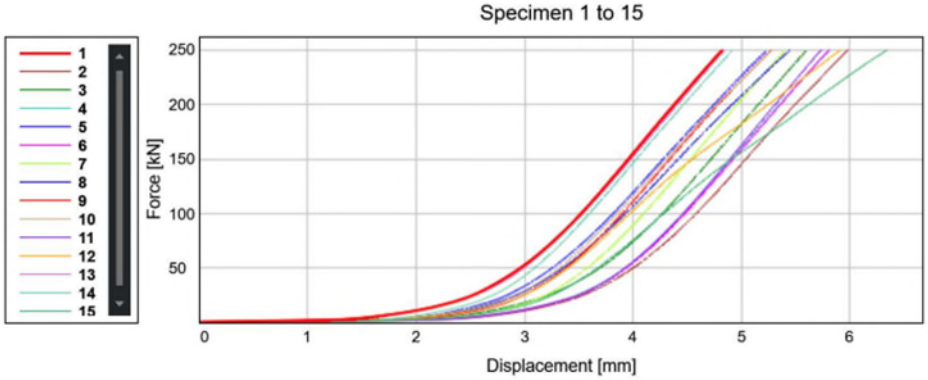

Figure 3 - Force/displacement graph.