



TÜRK STANDARDLARI ENSTİTÜSÜ
DENEY ve KALİBRASYON
MERKEZİ BAŞKANLIĞI
YAPI MALZEMELERİ LABORATUVARI GEBZE
MÜDÜRLÜĞÜ

TURKISH STANDARDS INSTITUTION
HEADSHIP OF TEST and CALIBRATION CENTER
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182585-1

07-25

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden/Firma :

(Adı, Adresi, Şehir vb.)

Requesting/Customer (Name, Address, City etc.)

AKGÜN YAPI VE ZEMİN KAPLAMALARI SAN. VE DİŞ TİC. LTD. ŞTİ. A.Ş.
ÖMERLİ MAHALLESİ ILGAZ SOK NO.7/1 ARNAVUTKÖY/İSTANBUL

Deney Talep Tarihi / No :

Order Date/No.

18.03.2025 / 2025-69042

Numunenin Tanımı :

(Cins, Marka, Sınıf, Tip, Tür, Model vb.)

Sample Description (Type, Mark, Class, Model etc.)

2025-096391, 95 / 5.000 MECHANICALLY LOCKED, MULTI-LAYER MODULE
FLOOR COVERINGS (MMF) USED IN FLOATING FLOOR, AREA SPC FLOOR,
UNICLIC, -, 5+1 - 0.50 mm, 2.00, paket

Numune Kabul Tarihi :

Sample Receipt Date

09.04.2025

Deneylerin Yapıldığı Tarih :

Date of Test

07.07.2025 / 07.07.2025

Uygulanan Standart Metot :

Applied Standard/Method

EN 13329:2006+A1:2008/DARBE MUKAVEMETİ, TS EN 438-2/LEKELENMEYE
MUKAVEMET, TS EN ISO 16581/TS EN ISO 16581-MOBİLYA AYAĞI ETKİSİ,
TS EN ISO 24343-1/TS EN ISO 24343-1- STATİK ÇUKURLAŞMA, TS EN ISO
4918/KOLTUK TEKERLEĞİ ETKİSİ TAYİNİ, TS ISO 24334/TS ISO 24334-
KİLİTLENME MUKAVEMETİ, TS ISO 24338/AŞINMA DİRENCİ

Raporun Sayfa Sayısı :

Number of pages of the report

2

Deney Sonucu :

Test Result

-

Açıklamalar :

Remarks

Castor chair resistance test was performed by using 'UNICLICK, -, 5mm - 0.50mm
wear layer' samples.

Yukarıda tanımlanan numune için laboratuvarımızda yapılan muayene ve deneylerden elde edilen sonuçlar müteakip sayfalarda verilmiştir.

The testing and/or measurement results are given on the following pages which are part of this report.



Tarih

Date

07.07.2025

Deney Sorumlusu

Person in charge of test

İBRAHİM İLKHAN

Kontrol Eden

Reviewer

AHMET ÖNDER ELİRİ

Onaylayan

Approved by

ARZU KOŞAR

Bu rapor, hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve karekodsuz raporlar geçersizdir. Bu rapor, müşteri tarafından laboratuvara ulaştırılan numuneler üzerinde yapılan deney sonuçlarını içermekte olup, "Ürün Belgesi" yerine geçmez.
This test report shall not be reproduced other than in full except with the written permission of the laboratory. Test reports without signature and seal are not valid. This report contains the test results performed on the samples delivered to the laboratory by the customer and does not replace the "Product Certificate".

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MUAYENE - DENEY SONUÇLARI TEST RESULTS

REQUIREMENT OF THE STANDARD	OBTAINED VALUES
Wear resistance IP, method A For PVC based wear layers or EN 24338 Class for 21-22 ≥ 200 Cycle, For PVC based wear layers or 21 $\geq 500/ 22 \geq 1\ 000$ Cycle Class for 23 ≥ 400 Cycle, For PVC based wear layers $\geq 1\ 500$ Cycle Class for 31 ≥ 600 Cycle, For PVC based wear layers $\geq 2\ 000$ Cycle Class for 32 ≥ 1200 Cycle, For PVC based wear layers > 4000 Cycle Class for 33 ≥ 2000 Cycle, For PVC based wear layers ≥ 5000 Cycle Class for 34 ≥ 4000 Cycle, For PVC based wear layers > 7000 Cycle	4700 Cycle
Impact resistance (big ball) EN 13329:2006+A1:2008 (EK-F^f) Class for 21-22 ≥ 400 mm, Class for 23 ≥ 600 mm, Class for 31 ≥ 800 mm, Class for 32 ≥ 1200 mm, Class for 33 ≥ 1600 mm, Class for 34 ≥ 1800 mm,	> 2000 mm
Resistance to staining (EN 438-2) Class for 21-22, 23 Water, coffee and cleaning solution (10 min): grade 4, Class for 31 group 1 ve group 2: grade 4, group 3: grade 3 Class for 32, 33, 34 için group 1 ve group 2: grade 5, group 3: grade 4	group 1 - grade 5 group 2 - grade 5 group 3 - grade 5
Effect of furniture leg (ISO 16581, tested with foot type 0) Class for 21-22, 23, 31 no requirement, Orther Class for No visible damage	No visible damage
Castor chair resistance (EN ISO 4918^b) Class for 21-22, no requirement, Class for 23 için 5000 Cycle ^a , Class for 31 için 10000 Cycle ^a Class for 32, 33, 34 için 25000 Cycle ^a	No layer disturbance to the surface, no delamination of the surface layer, cracks or disruptions for 25000 Cycle
Residual indentation (EN ISO 24343-1) Class for 21-22, 23, 31 underlay $\leq 0,3$ mm, without attached underlay $< 0,1$ mm Class for 32, 33 underlayer $\leq 0,2$ mm, without attached underlay $< 0,1$ mm Class for 34 underlayer $\leq 0,15$ mm, without attached underlay $< 0,1$ mm	0,07 (Underlayer)
Swelling (%) (ISO 24336) Class for 21-22, 23, 31 $\leq \% 20,0$ Class for 32 , 33, $\leq \% 18,0$ Class for 34 $\leq \% 12$	$\% 0,5$
Locking strength^c (kN/m) (ISO 24334) Class for 21-22, 23-31 no requirement, Class for 32, 33 Long side 1 kN/m, Short side 1,5 kN/m Class for 34 Long side 1.0 kN/m, Short side 3,5 kN/m	Short side 8,02 kN/m Long side 6,67 kN/m

a No layer disturbance to the surface only gloss changes, no delamination of the surface layer, cracks or disruptions.

b As system test with pre-attached or recommended underlay or if nothing is recommended test with an underlayment with CS of (400 ± 50) kPa with a thickness $(1,5 \pm 0,3)$ mm measured according to EN 16354.

c With a speed of 0,5 mm/min for wood based cores or 5 mm/min for polymer or other cores.

d Take the maximum of C_{avg} from wet climate ($23\ ^\circ\text{C}$, 85 % relative humidity) and the minimum of C_{avg} from dry climate ($23\ ^\circ\text{C}$, 30 % relative humidity) for the evaluation.

e If the product has pre-attached underlay (3.8), the test shall be carried out without the described underlay of the test standard.

f Only the assessment of cracks on the surface shall be carried out. The deformation is not to be taken into consideration.

g Only for moisture sensitive panels with wood based substrates or other moisture sensitive substrates or panels with surface layers with hygroscopic properties, e.g. wood veneer or cork.