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**TSE DENEY ve KALİBRASYON MERKEZİ BAŞKANLIĞI**  
**Yapı Malzemeleri Laboratuvarı Gebze Müdürlüğü**

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Test  
TS EN ISO/IEC 17025  
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HEADSHIP OF TSE TEST and CALIBRATION CENTER  
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**MUAYENE VE DENEY RAPORU**  
**TEST REPORT**

**Deneysel Talep Eden/Firma** : BMP TRADE LTD. ( ASLAN BOYA )  
*(Adı,Adresi,Şehir vb.)*  
**Requesting/Customer** : (BMP TRADE LTD. ( ASLAN BOYA ) : KİRLİ SANAYİ SİTESİ GÜNEY SANAYİ  
*(Name,Address,City etc.)* HASPOLAT LEFKOŞE --LEFKOŞE)

**Deneysel Talep Tarihi/No** : 23.09.2019 / 347223  
*Order Date / No*  
**Numunenin Tanımı** : 537108,FAYANS YAPIŞTIRICISI, ,SERFLEX 200 H , - , - , 25.00 kilogram  
*(No,Cins, Marka, Tip, Tür, Model vb.)*  
**Sample Description** : 537108,TILE ADHESIVES, SERFLEX 200 H,,25.00 kilogramme  
*(No,Type,Mark,Model etc.)*

**Numune Kabul Tarihi** : 23.09.2019  
*Test Item Receipt Date*

**Deneyslerin Yapıldığı Tarih** : 30.09.2019 - 08.11.2019  
*Date of Test*  
**Uygulanan Standard / Metod** : TS EN 12004-1:2017-04 SERAMİK KAROLAR İÇİN YAPIŞTIRICILAR - BÖLÜM 1:  
*Applied Standard/Method* GEREKLİLİKLER, PERFORMANS SÜREKLİLİĞİNİN DEĞERLENDİRİLMESİ VE DOĞRULANMASI, SINIFLANDIRMA VE İŞARETLEME  
TS EN 12004-1:2017-04 Adhesives for ceramic tiles - Part 1: Requirements, assessment and verification of constancy of performance, classification and marking

**Raporun Sayfa Sayısı** : 4  
*Number of pages of the report*

**Açıklamalar** :  
*Remarks*

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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

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Mühür  
Seal

Tarih  
Date

Deneysel Sorumlusu  
Person in charge of tests

Kontrol Eden  
Reviewer

Onaylayan  
Approved by

Cahit AYDIN  
Deneysel Personeli  
Testing Expert

Ahmet Önder ELİRİ  
Teknik Şef  
Technical Chief

Ahmet Önder ELİRİ  
Laboratuvar Müdürü V.  
Laboratory Manager Dep.

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This test report represents only tested sample(s), and shall not be used as Product Certificate



## MUAYENE VE DENEY SONUÇLARI TEST RESULTS

Sample Description	Extended Open Time(30 min), High Setting, Reduced Slip Cement Based Adhesive
Water ratio	27 %
Test Conditions	23 °C ± 2 °C Temp., 50% ± 5% Rel. Humidity, ≤0,2 m/s Air flow velocity
Sample Conditioning Before Test	At least 1 day at laboratory conditions

Fundamental Characteristics		
1a	Normal Setting Adhesives (C1)	
Characteristics	Requirement	Test Method
Initial Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup>	EN 12004-2:2017, 8.3
Tensile Adhesion Strength After Water Immersion	≥ 0,5 N/mm <sup>2</sup>	
Tensile Adhesion Strength After Heat Ageing	≥ 0,5 N/mm <sup>2</sup>	
Tensile Adhesion Strength After Freeze-Thaw Cycles	≥ 0,5 N/mm <sup>2</sup>	
Open Time: Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup> after not less than 20 minutes	EN 12004-2:2017, 8.1
1b	Fast Setting Adhesives (C1F)	
Characteristics	Requirement	Test Method
Early Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup> after not more than 6 hours	EN 12004-2:2017, 8.3
Open Time: Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup> after not less than 10 minutes	EN 12004-2:2016, 8.1
All other requirements as in table 1a		EN 12004-2:2017, 8.3
Optinial Characteristics		
1c	Special Characteristics	
Characteristics	Requirement	Test Method
Slip (T)	≤ 0,5 mm	EN 12004-2:2017, 8.2
Extended Open Time: Tensile Adhesion Strength(E)	≥ 0,5N/mm <sup>2</sup> after not less than 30 min	EN 12004-2:2017, 8.1
Deformable Adhesives: Transverse Deformation( S1)	≥ 2,5 mm and < 5 mm	EN 12004-2:2017, 8.6
Highly Deformable Adhesives: Transverse Deformation(S2)	≥ 5 mm	
1d	Additional Characteristics (C2)	
Characteristics	Requirement	Test Method
High Tensile Adhesion Strength	≥ 1 N/mm <sup>2</sup>	EN 12004-2:2017, 8.3
High Tensile Adhesion Strength After Water Immersion	≥ 1 N/mm <sup>2</sup>	
High Tensile Adhesion Strength After Heat Ageing	≥ 1 N/mm <sup>2</sup>	
High Tensile Adhesion Strength After Freeze-Thaw Cycles	≥ 1 N/mm <sup>2</sup>	
1e	Fast Setting Adhesives (C2F)	
Characteristics	Requirement	Test Method
Early Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup> after not more than 6 hours	EN 12004-2:2017, 8.3
Open Time: Tensile Adhesion Strength	≥ 0,5 N/mm <sup>2</sup> after not less than 10 minutes	EN 12004-2:2017, 8.1
All other requirements as in table 1d		EN 12004-2:2017, 8.3

### TS EN 12004-2: İntial Tensile Adhesion Strength

Sampl e No	Failure Load	Adhesion Strength	Failure Pattern	Mean Adhesion Str	Limit (±%20)	Results within limits	New Mean Adh. Str.	Requirement (Minimum)	Assessment
1	2150 N	0,9 N/mm <sup>2</sup>	CF-A	1,0 N/mm <sup>2</sup>	0,2 N/mm <sup>2</sup>	0,9 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	-
2	2550 N	1,0 N/mm <sup>2</sup>	CF-A			1,0 N/mm <sup>2</sup>			
3	2710 N	1,1 N/mm <sup>2</sup>	CF-A			1,1 N/mm <sup>2</sup>			
4	1880 N	0,8 N/mm <sup>2</sup>	CF-A			0,8 N/mm <sup>2</sup>			
5	1910 N	0,8 N/mm <sup>2</sup>	CF-A			0,8 N/mm <sup>2</sup>			
6	2460 N	1,0 N/mm <sup>2</sup>	CF-A			1,0 N/mm <sup>2</sup>			
7	2340 N	0,9 N/mm <sup>2</sup>	CF-A			0,9 N/mm <sup>2</sup>			
8	2150 N	0,9 N/mm <sup>2</sup>	CF-A			0,9 N/mm <sup>2</sup>			
9	2680 N	1,1 N/mm <sup>2</sup>	CF-A			1,1 N/mm <sup>2</sup>			
10	2590 N	1,0 N/mm <sup>2</sup>	CF-A			1,0 N/mm <sup>2</sup>			



## MUAYENE VE DENEY SONUÇLARI TEST RESULTS

### TS EN 12004-2 Tensile Adhesion Strength After Water Immersion

Sample No	Failure Load	Adhesion Strength	Failure Pattern	Mean Adhesion Str.	Limit ( $\pm 20$ )	Results within limits	New Mean Adh. Str.	Requirement (Minimum)	Assessment
1	2560 N	1,0 N/mm <sup>2</sup>	AF-T	1,0 N/mm <sup>2</sup>	0,2 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	-
2	2280 N	0,9 N/mm <sup>2</sup>	AF-T			0,9 N/mm <sup>2</sup>			
3	2140 N	0,9 N/mm <sup>2</sup>	AF-T			0,9 N/mm <sup>2</sup>			
4	2560 N	1,0 N/mm <sup>2</sup>	AF-T			1,0 N/mm <sup>2</sup>			
5	2410 N	1,0 N/mm <sup>2</sup>	AF-T			1,0 N/mm <sup>2</sup>			
6	2340 N	0,9 N/mm <sup>2</sup>	AF-T			0,9 N/mm <sup>2</sup>			
7	2550 N	1,0 N/mm <sup>2</sup>	AF-T			1,0 N/mm <sup>2</sup>			
8	2460 N	1,0 N/mm <sup>2</sup>	AF-T			1,0 N/mm <sup>2</sup>			
9	2340 N	0,9 N/mm <sup>2</sup>	AF-T			0,9 N/mm <sup>2</sup>			
10	2350 N	0,9 N/mm <sup>2</sup>	AF-T			0,9 N/mm <sup>2</sup>			

### TS EN 12004-2 Tensile Adhesion Strength After Heat Ageing

Sample No	Failure Load	Adhesion Strength	Failure Pattern	Mean Adhesion Str.	Limit ( $\pm 20$ )	Results within limits	New Mean Adh. Str.	Requirement (Minimum)	Assessment
1	980 N	0,4 N/mm <sup>2</sup>	CF-A	0,5 N/mm <sup>2</sup>	0,1 N/mm <sup>2</sup>	0,4 N/mm <sup>2</sup>	0,5 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	-
2	970 N	0,4 N/mm <sup>2</sup>	CF-A			0,4 N/mm <sup>2</sup>			
3	1460 N	0,6 N/mm <sup>2</sup>	CF-A			0,6 N/mm <sup>2</sup>			
4	1250 N	0,5 N/mm <sup>2</sup>	CF-A			0,5 N/mm <sup>2</sup>			
5	1310 N	0,5 N/mm <sup>2</sup>	CF-A			0,5 N/mm <sup>2</sup>			
6	1120 N	0,4 N/mm <sup>2</sup>	CF-A			0,4 N/mm <sup>2</sup>			
7	1360 N	0,5 N/mm <sup>2</sup>	CF-A			0,5 N/mm <sup>2</sup>			
8	1280 N	0,5 N/mm <sup>2</sup>	CF-A			0,5 N/mm <sup>2</sup>			
9	1390 N	0,6 N/mm <sup>2</sup>	CF-A			0,6 N/mm <sup>2</sup>			
10	1410 N	0,6 N/mm <sup>2</sup>	CF-A			0,6 N/mm <sup>2</sup>			

### TS EN 12004-2 Tensile Adhesion Strength After Freeze-Thaw Cycles

Sample No	Failure Load	Adhesion Strength	Failure Pattern	Mean Adhesion Str.	Limit ( $\pm 20$ )	Results within limits	New Mean Adh. Str.	Requirement (Minimum)	Assessment
1	3610 N	1,4 N/mm <sup>2</sup>	CF-A	1,3 N/mm <sup>2</sup>	0,3 N/mm <sup>2</sup>	1,4 N/mm <sup>2</sup>	1,3 N/mm <sup>2</sup>	1,0 N/mm <sup>2</sup>	-
2	3710 N	1,5 N/mm <sup>2</sup>	CF-A			1,5 N/mm <sup>2</sup>			
3	2980 N	1,2 N/mm <sup>2</sup>	CF-A			1,2 N/mm <sup>2</sup>			
4	3250 N	1,3 N/mm <sup>2</sup>	CF-A			1,3 N/mm <sup>2</sup>			
5	3450 N	1,4 N/mm <sup>2</sup>	CF-A			1,4 N/mm <sup>2</sup>			
6	3360 N	1,3 N/mm <sup>2</sup>	CF-A			1,3 N/mm <sup>2</sup>			
7	3140 N	1,3 N/mm <sup>2</sup>	CF-A			1,3 N/mm <sup>2</sup>			
8	3710 N	1,5 N/mm <sup>2</sup>	CF-A			1,5 N/mm <sup>2</sup>			
9	3120 N	1,2 N/mm <sup>2</sup>	CF-A			1,2 N/mm <sup>2</sup>			
10	3260 N	1,3 N/mm <sup>2</sup>	CF-A			1,3 N/mm <sup>2</sup>			





## MUAYENE VE DENEY SONUÇLARI TEST RESULTS

### TS EN 12004-2 Open Time (30 Min.): Tensile Adhesion Strength

Sample No	Failure Load	Adhesion Strength	Failure Pattern	Mean Adhesion Str	Limit ( $\pm 20\%$ )	Results within limits	New Mean Adh. Str.	Requirement (Minimum)	Assessment
1	540 N	0,2 N/mm <sup>2</sup>	CF-A	0,3 N/mm <sup>2</sup>	0,1 N/mm <sup>2</sup>	0,2 N/mm <sup>2</sup>	0,3 N/mm <sup>2</sup>	0,5 N/mm <sup>2</sup>	-
2	410 N	0,2 N/mm <sup>2</sup>	CF-A			0,2 N/mm <sup>2</sup>			
3	690 N	0,3 N/mm <sup>2</sup>	CF-A			0,3 N/mm <sup>2</sup>			
4	710 N	0,3 N/mm <sup>2</sup>	CF-A			0,3 N/mm <sup>2</sup>			
5	740 N	0,3 N/mm <sup>2</sup>	CF-A			0,3 N/mm <sup>2</sup>			
6	680 N	0,3 N/mm <sup>2</sup>	CF-A			0,3 N/mm <sup>2</sup>			
7	630 N	0,3 N/mm <sup>2</sup>	CF-A			0,3 N/mm <sup>2</sup>			
8	620 N	0,2 N/mm <sup>2</sup>	CF-A			0,2 N/mm <sup>2</sup>			
9	580 N	0,2 N/mm <sup>2</sup>	CF-A			0,2 N/mm <sup>2</sup>			
10	590 N	0,2 N/mm <sup>2</sup>	CF-A			0,2 N/mm <sup>2</sup>			

### TS EN 12004-2 Slip

Sample No	Slip	Mean Slip	Requirement(Max.)	Assessment
1	0,38 mm	0,40 mm	0,50 mm	-
2	0,40 mm			
3	0,42 mm			

