



**TÜRK STANDARDLARI ENSTİTÜSÜ**  
**TÜRK STANDARDLARINA UYGUNLUK BELGESİ**  
**TURKISH STANDARDS INSTITUTION**  
**CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS**

Markanın Tanımı Description of the Mark  
TSE veya/or  veya/or T S E

<b>BELGE NUMARASI</b> REFERENCE NUMBER OF LICENCE	022438-TSE-04/04
<b>BELGENİN İLK VERİLİŞ TARİHİ</b> DATE OF FIRST ISSUE OF LICENCE	13.01.2017
<b>BELGENİN SON GEÇERLİLİK TARİHİ</b> LICENCE VALID UNTIL	13.01.2025
<b>BELGE SAHİBİ KURULUŞUN ADI</b> NAME OF THE LICENCE HOLDER	TEKNOPANEL ÇATI VE CEPHE PANELLERİ ÜRETİM SANAYİ VE TİCARET ANONİM ŞİRKETİ
<b>BELGE SAHİBİ KURULUŞUN ADRESİ</b> ADDRESS OF THE LICENCE HOLDER	ORGANİZE SAN.BÖLGE 7.CADDE NO:10 AKDENİZ MERSİN/TÜRKİYE
<b>ÜRETİM YERİ ADI</b> NAME OF THE MANUFACTURING PLACE	TEKNOPANEL ÇATI VE CEPHE PANELLERİ ÜRETİM SANAYİ VE TİCARET ANONİM ŞİRKETİ
<b>ÜRETİM YERİ ADRESİ</b> ADDRESS OF THE MANUFACTURING PLACE	ORGANİZE SAN.BÖLGE 7.CADDE NO:10 AKDENİZ MERSİN / TÜRKİYE
<b>İPTAL EDİLEN BELGE NUMARASI (Varsa)</b> INDICATION OF SUPERSEDED LICENCE (if any)	022438-TSE-04/03
<b>TESCİLLİ TİCARİ MARKASI</b> REGISTERED TRADE MARK	teknopanel
<b>İLGİLİ TÜRK STANDARDI</b> RELATED TURKISH STANDARD	TS EN 14509 / 02.04.2014
<b>BELGE KAPSAMI</b> SCOPE OF LICENCE	

1. Mineral Wool (MW) Filled, Metal Faced Insulating Panels (Roof and External Wall Panels), Thickness: 50mm, 100mm, Mechanical properties for covering metals : Steel Surfaces: - Thickness Tolerance (EN 10143) : Nominal-Yield strength: Min. 220 N/mm<sup>2</sup>. Core materials specifications: Mineral Wool (MW) – Thermal Conductivity ( $\lambda$ ) Max. 0,042 W/mK – Density : 100  $\pm$  10 (Kg/m<sup>3</sup>), Panels Specifications: -Shear Strength of Core Material (fcv) : Min. 0.06 MPa- Shear Modulus of Core Material (G) : Min. 4.6 MPa- Creep Coefficient ( $\Phi_t$ , t=100 000 hours) - for Roofs (Self Weight): Max. 0.9, Creep Coefficient ( $\Phi_t$ , t=2000 hours) - for Roofs (Snow Weight): Max. 0.6 – Compressive Strength ( $\sigma_{10}$ ) : Min. 0.045 MPa.- Shear Stress-Long Term Loading (fcv long term): t=1000 hours , Min. 0.050 MPa. t= 2000 hours Min. 0.045 MPa, t=100 000 hours, Min. 0.040 MPa- Cross Panel Tensile Strength(fct) Min. 0.060 MPa.- Cross Panel Tensile Strength at Elevated Temperatures: Min. 0.050 MPa. Bending Moment Capacity and Stiffness (Mu) Positive Bending: Min. 2.30 kNm/m Negative Bending: Min. 2.30 kNm/m- Wrinkling Strength ( $\sigma_w$ ): Positive: Min. 95 MPa, Negative Min. 100 MPa- Bending Moment Capacity Over a Central Support: Positive: Min. 3 kNm/m, Negative: Min. 3 kNm/m- Wrinkling Stress Over a Central Support( $\sigma_w$ ): Positive: Min. 120 MPa, Negative: Min. 130 MPa- Reaction to Fire: A2.S1.d0 (Scope Change: 02.11.2021)

*e-imzalı/e-signed*

22.01.2024

On Behalf Of The Head Of Certification Center  
FATİH KURT

TSE ADANA CERTIFICATION DIRECTOR

\*This certificate also shows that the production place of the certified product meets the requirements of Institute.

\*This certificate under any circumstances cannot be changed, duplicated partially or in a way that makes it difficult to read and erasure cannot be done.

\*TSE \* Address: Yakapınar Mah. D-400 Bulvarı No:174 Yüreğir \* Telephone: 03224581940-41\* Fax: 03224588243

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(022438-TSE-04/04nolu belge devamı) : TEKNOPANEL ÇATI VE CEPHE PANELLERİ ÜRETİM SANAYİ VE TİCARET ANONİM ŞİRKETİ  
İLGİLİ TÜRK STANDARDI(RELATED TURKISH STANDARD) TS EN 14509 / 02.04.2014

2. Polyurethane (PUR) Filled, Metal Faced Insulating Panels (Roof and External Wall Panels) Thickness: 50mm, 100mm, Mechanical properties for covering metals : Steel Surfaces: - Thickness Tolerance (EN 10143) : Nominal- Yield strength: Min. 220 N/mm<sup>2</sup>. Core materials specifications: Polyurethane (PUR)– Self adhesive, Thermal Conductivity ( $\lambda$ ) Max. 0,023 W/mK – Density : 40  $\pm$  2 (Kg/m<sup>3</sup>), Panels Specifications: -Shear Strength of Core Material (fcv) : Min. 0.11 MPa- Shear Modulus of Core Material (G) : Min. 2,00 MPa, - Creep Coefficient ( $\Phi_t$ , t=100 000 hours) - for Roofs (Self Weight): Max. 1.1, Creep Coefficient Coefficient ( $\Phi_t$ , t=2000 hours) - for Roofs (Snow Weight): Max. 0.7, – Compressive Strength( $\sigma_{10}$ ) : Min. 0.095 MPa.- Shear Stress-Long Term Loading (fcv long term): t=1000 hours , Min. 0.070 MPa. t= 2000 hours Min. 0.065 MPa, t=100 000 hours, Min. 0.040 MPa- Cross Panel Tensile Strength(fct) Min. 0.060 MPa.- Cross Panel Tensile Strength at Elevated Temperatures: Min. 0.080 MPa. Bending Moment Capacity and Stiffness (Mu) Positive Bending: Min. 3,50 kNm/m Negative Bending: Min. 2.30 kNm/m- Wrinkling Strength( $\sigma_w$ ) Positive: Min. 140 MPa, Negative Min. 95 MPa- Bending Moment Capacity Over a Central Support: Positive: Min. 4,00 kNm/m, Negative: Min. 3,20 kNm/m- Wrinkling Stress Over a Central Support Positive: Min. 140 MPa, Negative: Min. 130 MPa- Reaction to Fire: B.S2.d0 (Scope Change: 02.11.2021)

3. Expanded Polystyrene (EPS) Filled, Metal Faced Insulating Panels (Roof and External Wall Panels), Thickness: 50mm, 100mm, Mechanical properties for covering metals : Steel Surfaces: - Thickness Tolerance (EN 10143) : Nominal- Yield strength: Min. 220 N/mm<sup>2</sup>. Core materials specifications: EPS, Thermal Conductivity ( $\lambda$ ) Max. 0,038 W/mK – Density : 16  $\pm$  1 (Kg/m<sup>3</sup>), Panels Specifications: -Shear Strength of Core Material (fcv) : Min. 0.050 MPa- Shear Modulus of Core Material (G) : Min. 3,00 MPa, - Creep Coefficient ( $\Phi_t$ , t=100 000 hours) - for Roofs (Self Weight): Max. 1.75, Creep Coefficient Coefficient ( $\Phi_t$ , t=2000 hours) - for Roofs (Snow Weight): Max. 1.35 — Compressive Strength( $\sigma_{10}$ ) : Min. 0.080 MPa.- Shear Stress-Long Term Loading (fcv long term): t=1000 hours , Min. 0.050 MPa. t= 2000 hours Min. 0.045 MPa, t=100 000 hours, Min. 0.040 MPa- Cross Panel Tensile Strength(fct) Min. 0.060 MPa.- Cross Panel Tensile Strength at Elevated Temperatures: Min. 0.050 MPa. Bending Moment Capacity and Stiffness (Mu) (for Roofs) Positive Bending: Min. 3,70 kNm/m Negative Bending: Min. 2.30 kNm/m- Wrinkling Strength: Positive: Min. 150 MPa, Negative Min. 100 MPa- Bending Moment Capacity and Stiffness (Mu) (for Walls) Positive Bending: Min. 4.40 kNm/m Negative Bending: Min. 4.40 kNm/m- Wrinkling Strength( $\sigma_w$ ): Positive: Min. 185 MPa, Negative Min. 185 MPa- Bending Moment Capacity Over a Central Support (for Roofs): Positive: Min. 4,30 kNm/m, Negative: Min. 2,40 kNm/m- Wrinkling Stress Over a Central Support( $\sigma_w$ ) Positive: Min. 170 MPa, Negative: Min. 110 MPa- Bending Moment Capacity Over a Central Support (for Walls): Positive: Min. 3,30 kNm/m, Negative: Min. 3,30 kNm/m- Wrinkling Stress Over a Central Support( $\sigma_w$ ) Positive: Min. 140 MPa, Negative: Min. 140 MPa- Reaction to Fire: E (Scope Change: 02.11.2021)

*e-imzalı/e-signed*

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