

 **SHIPRADE**
S-Ext EDF®

S-Ext EDF Technical Data Sheet (1)

Characteristics	Test Method	Tested Value	Required Value
Thickness	EN 438-2 section 5 4 mm 6 mm 8 mm 10 mm 13 mm 18 mm 22 mm	4.1 mm 6.2 mm 8.1 mm 10.2 mm 13.4 mm 18.3 mm 22.3 mm	3.0 ≤ t < 5.0 mm : ± 0.3 mm 5.0 ≤ t < 8.0 mm : ± 0.4 mm 8.0 ≤ t < 12.0 mm : ± 0.5 mm 8.0 ≤ t < 12.0 mm : ± 0.5 mm 12.0 ≤ t < 16.0 mm : ± 0.6 mm 16.0 ≤ t < 20.0 mm : ± 0.7 mm 20.0 ≤ t < 25.0 mm : ± 0.8 mm 25.0 ≤ t : According To Agreement customer / producer
Surface Quality	EN 438-2 section 4 Dirt , Spots and similar surface defects Fibers , Hairs and scratches	≤ 2 mm ² /m ² ≤ 20 mm/m ²	≤ 2 mm ² /m ² ≤ 20 mm/m ²
Density	ISO 1183 - 1	1.43	Min. 1.35 gr/cm ³
Wear Resistance	EN 438-2 section 10 EDS / EDF	IP = 235 Rev. Wear Value = 400 Rev.	Initial Point ≥ 150 Rev. Wear Value ≥ 350 Rev.
Scratch Resistance	EN 438-2 section 25 EDS / EDF	> 6 N	Textured Surface Min. 3 N
Impact Resistance	EN 438-2 Big Ball section 21 EDS / EDF t ≥ 6.0 mm	No Crack, 3.5 mm	1800 mm height : no crack , 10 mm Max.
Surface Crack @ 80°C 20 Hours	EN 438-2 section 24 CGS / CGF	Level 4	Min. level 4
Resistance to Dry Heat at 180°C	EN 438-2 section 16 CGS	Level 5	Min. level 4

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Characteristics	Test Method	Tested Value	Required Value
Resistance to Water Vapor	EN 438-2 section 14 EDS / EDF	Level 5	Min. level 4
Resistance to Boiling Water	EN 438-2 section 12 EDS / EDF t ≥ 5.0 mm Textured Surface Finish	$\Delta W = 0.5\%$ $\Delta T = 0.4\%$ Level 5	Max. 2% in weight Max. 2% in thickness Min. level 4
Resistance To Wet Condition (Immersion in water 65°C ; 48 Hours)	EN 438-2 section 15 EDS , EDF t ≥ 5.0 mm	$\Delta W = 1.0\%$ Level 5	Max. 5% in weight Color change Min. level 4

S-Ext EDF Technical Data Sheet (2)

Characteristics	Test Method	Tested Value	Required Value
Resistance to Staining	EN 438-2 section 26 EDS , EDF Group 1 + 2 Group 3	 Level 5 Level 5	 Min. level 5 Min. level 4
Flatness	EN 438-2 section 9 EDS , EDF $6.0 \leq t \leq 10.0$ mm	 1.87 mm	 Max. 3 mm / 1 M length
Light fastness	EN 438-2 section 27 ⁽¹⁾ EDS , EDF Gri skala ⁽⁴⁾	 Level 5	 Min. level 4
Resistance To UV Light 3000 Hour	EN 438-2 bölüm 28(2) EDS , EDF Grey Scale ⁽⁴⁾ Contrast Appearance	 Level 4 Level 5	 Min. level 3 Min. level 4
Resistance To Artificial Weathering 3000 Hour	EN 438-2 section 29(1) EDS , EDF Grey Scale ⁽⁴⁾ Contrast Appearance	 Level 4 Level 5	 Min. level 3 Min. level 4
Resistance to Climatic Shock	EN 438-2 section 17 EDS , EDF $t \geq 5.0$ mm	 L = 0.18% W = 0.36%	 L : Max. 0.3% W : Max. 0.6%

S-Ext EDF Technical Data Sheet (2)

Characteristics	Test Method	Tested Value	Required Value
Resistance to Climatic Shock	EN 438-2 section 19 EDS , EDF		
	Appearance	Level 5	Min. level 4
	Flexural Strength Index Ds	0.98	Min. 0.95
	Flexural Modulus Index Dm	0.97	Min. 0.95
Resistance To Climatic Changes	Producer Internal Test ^(P) Appearance	Level 5	Min. level 4
Flexural Strength	EN ISO 178 EDS , EDF	110.7 MPa	Min. 80 MPa
Flexural Modulus	EN ISO 178 EDS , EDF	9834 MPa	Min. 9000 MPa
Tensile Strength	EN ISO 527 – 2 EDS , EDF	85 MPa	Min. 60 MPa
Coefficient Of Linear Thermal Expansion (COTE)	ASTM D696-08 ⁽³⁾	6.0 x 10-6 mm / mm °c	---

S-Ext EDF Technical Data Sheet (3)

Characteristics	Test Method	Tested Value	Required Value
Thermal Conductivity	ASTM C 518	0.416 W/mK	---
Total Volatile Organic Compound Emission	ASTM D5116	< 0.010 mg/m ² /hr	< 0.5 mg/m ² /hr
Fire Classification ⁽⁷⁾	EN 13501-1 4.0 ≤ t < 5.9 mm 6.0 ≤ t < 10.0 mm		
	ASTM E 84 – 10 6 – 10 mm	B S2 d0 B S1 d0 ERA – 14 – 095 22/10/2014	---
	BS 476 Part 7 : 1997	Class A	---
	DIN 5510-2:2009-05	Class 1	---
	0.8 mm	S4 ; SR2 ; ST2	
	1.2 mm	S2 ; SR2 ; ST2	
Color Difference ⁽⁸⁾	ISO 7724	Uni Colors : ΔE ≤ 1.0	---
	Producer Internal Standard ⁽⁹⁾	Printed Designs : No Visual Difference	---
Resistance To SO ₂ ⁽⁶⁾	DIN 50018 50 tur	4 – 5 Grey Scale	---

Remarks :

(1)Based on test method EN ISO 4892-1 and 4892-2.

(2)Based on test method EN ISO 4892-3.

(3)COTE test is conducted between +30°C To -30°C.

(4)Grey Scale assessment according to EN 20105-A02.

(5)Producer Internal test procedure for resistance to climatic changes is available upon Request only.

(6)“Acid Rain ” damp heat alternating atmosphere , 50 Cycles (Test Report Upon Request).

(7)Upon Customer request.

(8)The Color Difference refers to the color deviation from the master sample as agreed between Shiprade and the customer per batch size (Refer to project batch size).

(9)Producer internal test method for evaluation of color difference in plain color design. As part of Producer quality test , The color difference is evaluated and can be guaranteed according to the claimed value. Any other color testing method and/or tested value will not be acceptable by Shiprade and can not be the base to any claim.

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S-Ext EDF Cleaning Instructions :

The following cleaning instruction is suitable for periodic cleaning / maintaining and for cleaning after installation (Adhesive residue ets.) :

2) Use Non abrasive cloth (Cotton Based / Vileda® Microclean Cloth) soaked with one of the following cleaners :

- Regular cleaning soap 5% solution (any household soap is suitable for this purpose)
- Antistatic Cleaning + Care Agent for Plastics (AKU) from Burnus®
- Oxivir Plus Spray (Produced by Diversey – www.diverseysolutions.com)
- Sprint Spitfire Spray (Produced by Diversey – www.diverseysolutions.com)

All mechanical cleaning system , e.g. rotating brushes / wiper blades etc. , are unsuitable for the surface and may cause a permanent damage to the decorative surface .

3)Wipe the surface with non abrasive cloth from any residue of the cleaner

4)Wipe the surface with Non abrasive clothe soaked with regular water and leave the surface for 5 minutes in order to dry .

5)Clean the surface again with Dry cloth .

6)For cleaners preparation method – follow producer instructions

7) G 7) The following chemicals **Should Not Be Used for Cleaning the S-Ext Surface :**

7.1 Hard base solutions : Ammonium Hydroxide, Sodium Hydroxide, Sodium Hypochlorite, Sodium Chloride.

7.2 Hard acidic solutions : Hydrochloric Acid, Sulphuric Acid, Nitric Acid, Phosphoric Acid, Acetic Acid, Hydrofluoric Acid, Chromic Acid, Formaldehyde, Formic Acid, Phenol.

7.3 Reagents : Silver Nitrate, Potassium Permanganate, Ferric (III) Chloride, Copper Sulphate, Iodine Tincture.

7.4 Organic solvents : Furfural, Acetone, Ethyl alcohol, Methyl Ethyl Ketone, Dichloromethane, Ethylacetate, n – Butyl Acetate, n – Hexane, Methyl Alcohol, Methyl Isobutyl Ketone, TetraHydroFurane (THF), Toluene, Tri Chloro Ethylene, Xylene, Methyl Violet 2B.

7.5 Organic compounds : Mono Ethylene Glycol (MEG), Di Ethylene Glycol (DEG)