



## Technical Data Sheet

### G-Ext<sup>®</sup> EXTERIOR DECORATIVE PANELS

G-Ext<sup>®</sup> show superior endurance against strong weather conditions; direct sun light, rain, acid rain, wind and friction. The special coating and curing technology ensures the UV resistance and provides colour stabilization which takes G-Ext<sup>®</sup> always one step ahead from equivalent products of the competitors.

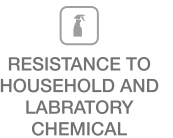
G-Ext<sup>®</sup> decorative panels has compliance certificate in accordance with European Standards. Therefore; they comply with entire product and environmental regulations. Besides its superior endurance, it does not contain hazardous materials and it is environment friendly.

G-Ext<sup>®</sup> decorative panels can be produced in B1 class which has extra fire-resistance feature if requested. G-Ext<sup>®</sup> decorative panels have 10 years of guarantee and an extensive life span, provided that conditions specified in general specification are followed.

**G-Ext<sup>®</sup> is used for all types of exterior cladding on buildings and structures such as residents, workplaces, business centers, banks, public buildings, sport halls, stadiums, airports and hospitals as well as balcony coatings.**

EN Classification		EDS, EDF
EN 438 6 / 7	Thickness Range	4mm - 20mm
	Dimensions	1300x2800mm / 1300x3050mm other sizes upon request.

Surface of G-Ext<sup>®</sup> panels is enhanced by using electron beam curing (EBC) technology which is used by limited number of companies around the world.



Characteristics	Test Method	Test Value	Required Value
Thickness	EN 438-2 Section 5 4 mm Nominal 6 mm Nominal 8 mm Nominal 10 mm Nominal 13 mm Nominal 18 mm Nominal 22 mm Nominal	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 & similar surface defects  Fibers, hairs & scratches	≤ 2 mm <sup>2</sup> /m <sup>2</sup>  ≤ 20 mm/m <sup>2</sup>	≤ 2 mm <sup>2</sup> /m <sup>2</sup>  ≤ 20 mm/m <sup>2</sup>
Density	ISO 1183 - 1	1.43	Min. 1.35 gr/cm <sup>3</sup>
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  Textured Surface Finish	Level 5	Min. Level 4
Resistance to Water Vapor	EN 438-2 Section 14 EDS / EDF Textured Surface Finish	Level 5	Min. Level 4
Resistance to Boiling Water	EN 438-2 Section 12 EDS / EDF t ≥ 5.0 mm  Textured Surface Finish	ΔW = 0.5% ΔT = 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	ΔW = 1.0% Level 5	Max. 5% in weight Color change min. level 4
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

Characteristics	Test Method	Test Value	Required Value
Flatness	EN 438-2 Section 9 EDS, EDF  6.0 ≤ t ≤ 10.0 mm	1.87 mm	Max. 3 mm / 1 m length
Light Fastness	EN 438-2 Section 27 <sup>(1)</sup> EDS, EDF  Grey Scale <sup>(4)</sup>	Level 5	Min. Level 4
Resistance to UV Light 3000 hour	EN 438-2 Section 28 <sup>(2)</sup> EDS, EDF  Grey Scale <sup>(4)</sup>  Contrast Appearance	Level 4 Level 5	Min. Level 3 Min. Level 4
Resistance to Artificial Weathering 3000 hour	EN 438-2 Section 29 <sup>(1)</sup> EDS, EDF  Grey Scale <sup>(4)</sup>  Contrast Appearance	Level 4 Level 5	Min. Level 3 Min. Level 4
Dimensional Stability at Elevated Temperature ( 70°C; 90% RH )	EN 438-2 Section 17 EDS, EDF  t ≥ 5.0 mm	L = 0.18% W = 0.36%	L : max. 0.3% W : max. 0.6%
Resistance to Climatic Shock	EN 438-2 Section 19 EDS, EDF  Appearance  Flexural Strength Index Ds  Flexural Modulus Index Dm	Level 5  0.98  0.97	Min. Level 4  Min. 0.95  Min. 0.95
Resistance to Climatic Changes	Gentas Internal Test <sup>(5)</sup>  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 <sup>(3)</sup>	6.0 x 10-6 mm / mm °C	—
Thermal Conductivity	ASTM C 518	0.416 W/mK	—
Total Volatile Organic Compound Emission	ASTM D5116	< 0.010 mg/m <sup>2</sup> /hr	< 0.5 mg/m <sup>2</sup> /hr

Characteristics	Test Method	Test Value	Required Value
Fire Classification <sup>(7)</sup>	EN 13501-1		—
	4.0 ≤ t < 5.9 mm	B S2 d0	—
	6.0 ≤ t < 10.0 mm	B S1 d0 ERA - 14 - 095 22.10.2014	—
	ASTM E 84 – 10 06mm - 10mm	Class A	—
	BS 476 Part 7 : 1997	Class 1	—
	DIN 5510-2:2009-05		
	0.8 mm	S4 ; SR2 ; ST2	
	1.2 mm	S2 ; SR2 ; St2	
Color Difference <sup>(8)</sup>	ISO 7724	Uni Colors : ΔE ≤ 1.0	—
	Gentas Internal Standard <sup>(9)</sup>	Printed Designs: No Visual Difference	—
Resistance to SO <sub>2</sub> <sup>(6)</sup>	DIN 50018	4 – 5	—
	50 Cycles	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) Gentas 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 Gentas and the customer per batch size ( Refer to project batch size ) .
- (9) Gentas internal test method for evaluation of color difference in printed designs ( Wood Grain / Abstract ) .

**G-Ext Cleaning Instructions :**

- 1)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)The following chemicals should not be used for cleaning the G-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 ) .