



Technical Data Sheet

G-Ext[®] EXTERIOR DECORATIVE PANELS

G-Ext[®] 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[®] always one step ahead from equivalent products of the competitors.

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

G-Ext[®] 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 | | EDF |
| EN 438 6 / 7 | Thickness Range | 4mm - 20mm |
| | Dimensions | 1300x2800mm / 1300x3050mm other sizes upon request. |

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



WATER REPELLANT



DRY HEAT RESISTANCE



SCRATCH & ABRASION RESISTANCE



LOW LIGHT REFLECTIVITY



HEAT & COLD RESISTANCE



EASY TO CLEAN



ULTRA COLOR INTENSITY



IMPACT RESISTANCE



RESISTANCE TO HOUSEHOLD AND LABORATORY CHEMICAL

| 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 ² /m ² ≤ 20 mm/m ² | ≤ 2 mm ² /m ² ≤ 20 mm/m ² |
| Density | ISO 1183 - 1 | ≥ 1.35 gr/cm ³ | ≥ 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 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 ⁽¹⁾ EDS, EDF Grey Scale ⁽⁴⁾ | Level 5 | Min. Level 4 |
| Resistance to UV Light 3000 hour | EN 438-2 Section 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 |
| 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 ⁽⁵⁾ 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 | — |
| 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 |

| Characteristics | Test Method | Test Value | Required Value |
|--|---|--|----------------|
| Fire Classification ⁽⁷⁾ | 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 ⁽⁸⁾ | ISO 7724 | Uni Colors : ΔE ≤ 1.0 | — |
| | Gentas Internal Standard ⁽⁹⁾ | Printed Designs: No Visual Difference | — |
| Resistance to SO ₂ ⁽⁶⁾ | 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 plain color design . As part of Gentas 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 Gentas and can not be the base to any claim .

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).