Open up to an Eco-World

UPVC WINDOW & DOOR SYSTEM

INTERPLAST COMPANY LIMITED
Welcome to Interplast Building Materials Division’s world of thoughtful innovations. As an integral part of Group Harwal Technologies - an international investment and management company specialized in various manufacturing industries, Interplast started the Building Materials Division specifically to provide state-of-the-art products for the continuously growing construction industry of the Middle East.

The primary goal of this division is to innovate and create quality products that enhance the new-age building architecture. And the latest addition to our impressive range is DURAMAX® UPVC Window & Door Profiles.

DURAMAX® is a unique combination of technological expertise in plastic processing over the last 60 years, and the use of vast resources in manufacturing - to give you high quality UPVC window and door profiles. And this path-breaking innovation is created at a fully-integrated manufacturing facility that includes high-tech co-extrusion equipment, in-house tooling expertise and specialist supervision.
Everything that you want of your windows and doors, DURAMAX® has it. Today, DURAMAX® is a market leader and a pioneer in manufacturing UPVC windows.

Having been developed in the Gulf, DURAMAX® is backed by the understanding of the specific needs of the Gulf climate, and factoring in the harsh climatic nature of this region. Extensive research and development behind the product range ensures that it is the perfect solution in UPVC Windows & Doors.
Advantages over conventional windows systems

DURAMAX® UPVC windows are designed to enhance the quality of your life in various ways.

**WELDED JOINTS**
Unlike ordinary, conventional systems, DURAMAX® UPVC windows/doors are welded, ensuring that there is no air gap. This high quality precision binding keeps the house free from dust and noise.

**FIRE RETARDANT**
UPVC material used in DURAMAX® profiles eliminates the hazards of fire, and ensures safety for you and your family.

**THERMAL BREAK REDUCES ELECTRICITY COST**
DURAMAX® windows are made from UPVC materials, which are bad conductors of heat, thus keeping the house cool and reducing consumption of electricity.

**ANTISTATIC PROPERTY**
The antistatic nature of UPVC repels dust and other harmful dust particles from the panel.

**ISLAMIC ARCHES POSSIBLE**
Unlike conventional window, DURAMAX® UPVC windows are more flexible and can be easily shaped into arches and various styles of Islamic designs.

**WOODEN FINISH LAMINATES AS GOOD AS WOOD**
Wooden Finish laminates are aesthetically designed to match the look and feel of real wood. So when laminated on profiles it appears like a natural wooden window.
MAXIMUM WATER TIGHTNESS AND WIND RESISTANCE
DURAMAX® window systems incorporate broader corner profiles, which have high resistance to driving rain and joint tightness, ensuring added protection from strong wind, heavy rain and salty air.

RECYCLABLE
UPVC is easy to recycle and as such do not leave any hazardous waste into the environment.

SMOOTH SURFACE FOR EASY TO CLEANING
The surface of the UPVC is non-porous and does not allow dust or any other dust particle to settle on its surface. This allows easy cleaning of all doors and windows.

Coextruded UV Protection Layer key to performance

All DURAMAX® UPVC profiles come with a COEXTRUDED UV PROTECTION LAYER, specially suited to the harsh weather conditions of the Gulf region. This extra layer of cap stock gives additional thermal protection and keeps out the heat & dust.

Note: Blue Colour shown in the picture is only to indicate transparent UV Layer of the actual profile.
It’s the technology of the future, designed to make the quality of life richer and help preserve the environment and natural resources.

DURAMAX® UPVC’s slimmer, lighter profiles optimize material usage. Subject to the number of sashes, various design alternatives permit wider windows and doors, to meet modern architectural design requirements. The frame depth of only 60 mm and easy combinations of profiles in the DURAMAX® systems, for instance: coupling and angle or extension profiles, offer sleek designs.

Different types of glass, like security glass of up to maximum 28mm thickness can be installed. The colourfast, properties of UPVC allow minimum maintenance to be kept in superior condition. Research proves that even extended exposure to harsh environmental conditions does not affect the UPVC. Keeping them looking as good as new!

UPVC technology improves the window system’s performance, through increased thermal insulation with a reduction of energy consumption and improved sound insulation. The technology also optimizes the use of raw material components, giving refined product, ensuring longevity with an increased lifespan of UPVC profiles. It can be recycled easily, to reduce consumption of natural resources, thus protecting the environment.
Quality & Beauty are No Compromise

Beautiful things are readily noticed. On this count too DURAMAX® scores high. They are strikingly attractive and beautiful. They bring fresh aesthetic beauty to new and old buildings alike. DURAMAX® UPVC windows are built according to a carefully designed profile concept. This concept allows for many different window designs, with the widest variety. With these windows of all shapes and designs, varying from rectangular, polygonal, round or extra large units you can implement your own personal style. When it comes to making your ideas a reality, DURAMAX® profile systems give you virtually unlimited freedom.
Interplast Building Materials Division has been in the business of window and door technology for a while now. All our products are exclusively created with state-of-the-art inhouse formulation, that makes ‘LEAD FREE’ UPVC profiles more resistant to weathering. The creation of DURAMAX® is yet another means of pursuing our philosophy of excellence in an effort to help ensure human health and preserve the environment.

DURAMAX®’s highly impact resistant profiles are built to last. A wide variety of mullion and transom options offer many design possibilities for architects to create beautiful creations throughout the world. Durability, comfort and style are further enhanced through engineered design for excellent insulation and “easy clean”, low maintenance surfaces. Brush seals ensure that they are tight and allow smooth operation. The perfectly adapted universal hardware is easy to operate.

Customised solutions

Our working philosophy involves not just providing you with our products, but partnering with you and customising solutions according to your needs. We are with you all the way. Through the entire course of the work plan, followed by after sales service and additional services for fabrication equipment, training and accessories being made available.
The technical requirements, combined with continuous improvements, form the circle of quality established by DURAMAX®. The level is maintained with regular checks on the quality of their profiles by way of analysis of random samples taken from daily production. This ensures that their quality always accords with the highest of demands. At DURAMAX®, quality must meet the most stringent standards of the industry 100% of the time. This means extending quality control to the entire profile manufacturing process.

**Range of laminates & colours**

DURAMAX® UPVC window & door profiles give you a whole colour palette and a range of veneer finishes, to choose from. Your DURAMAX® windows and door profiles can be made to match your choice of colour or wood finish. Design and aesthetics are not a compromise when you choose DURAMAX®.

![Range of colours](image)

- GOLDEN OAK
- SAPELI
- GREEN
- MACOREE
- ROSE WOOD
- BEIGE

Colours & textures are indicative, for actual wood texture & colour please request for sample

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**Raw Materials**
- Granulometry
- Humidity as %
- Impurities
- Adhesive bonding capacity, etc.

**Manufacturing**
- Jellification
- Vicat Temperature
- Modulus of elasticity
- Dimensions and Tolerances

**Finished Profile**
- Impact resistance
- Xenotest for resistance to Weathering
- Strength of corners
There are many windows to this eco-world...

The DURAMAX® UPVC technology may be one-of-kind but the choices within the range are many. To begin with our window systems include:

Profiles used

- TNT 01 - Fix frame
- TNT 02 - Sash open in
- TNT 09 - Double-glazed bead
- TNT 16 - Architrave
- TNT 06 - Mullion

Advantages

- The design of three-chamber system enhances the thermal and sound insulation.
- The outer wall thickness using state-of-the-art special UPVC compound ensures high strength of corner welding, high impact resistance equivalent to international standards. Indigenously developed co-extruded UV protection layers provide an additional protection to profiles to withstand harsh weather conditions in the Gulf region. A unique advantage over many profiles available in the market.
- Various glass beads with co-extruded gasket provide single glaze, double glaze and triple glaze options.
- A detachable architrave is equipped with the frame profiles so that architrave can be used both in external and internal applications.
- Anti static surface of DURAMAX® profiles prevents depositing of dust/dirt and this making it easier to clean.

Turn & Tilt Window
DURAMAX® high impact strength profile can be used for windows as well as door, which makes assembly much easier.

Studs inside the reinforcement chamber will keep the metal reinforcement profile away from touching the outer wall of the UPVC profile.

The sash and frame profiles are designed to accept all kinds of accessories available in the market.

Metal reinforcement chambers are scientifically designed to withstand high wind load. Chambers are designed to accept standard steel or aluminum profiles, easily available in the market.

Elegant 15º edges on profiles are visually pleasing.

Profiles used

- TNT 01 - Fix frame
- TNT 04 - Door Sash open inside
- TNT 05 - Door Sash open outside
- TNT 07 - Dummy Mullion
- TNT 09 - Double-glazed bead

Hinged Door
Sliding Door

Profiles used
- SW 01 – three track sliding frame
- SW 04 – Sliding door sash
- SW 05 – Sliding fix frame
- SW 07 – Sliding door interlock
- SW 09 – Sliding fly screen sash
- SW 12 – Sliding double glazed bead

Advantages
- Slope on inner sliding area [below the tracks] ensures smooth and isolated water drainage.
- Window sash scientifically designed to accept all kinds of accessories available in the market.
- Large metal reinforcement chambers are designed to withstand maximum wind resistance.
- Glass beads with co-extruded gaskets are provided for single and double-glazing.
- Specially made sleek design of sliding fix frame [SW 05] makes the construction of sliding and fixed windows easier, as it can be used as transom too.
- The profiles are designed to have an impressive and harmonious view.

Sliding Window

Profiles used
- SW 01 – three track sliding frame
- SW 03 – Sliding window sash
- SW 05 – Sliding fix frame
- SW 08 – Sliding window interlock
- SW 09 – Sliding fly screen sash
- SW 12 – Sliding double glazed bead
DURAMAX PVC Sandwich Panel

- Available in standard sizes
- Option of sandwiching Glass panels to create see through mechanism
- Different finishes possible (Wooden like)
- Various designs possible for the Doors (Architectural)
- Efficient Silent mechanism, Fully insulated.
- Can be adapted to any security systems 3 point code security.
- Can be accessorized easily
- Multiple door installation possible (3 door 4 door etc)

Available Panel Sizes

<table>
<thead>
<tr>
<th>UPVC Skin Thickness</th>
<th>Thickness of EPS/XPS Insulation</th>
<th>Total Panel Thickness</th>
<th>Standard Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.50 mm</td>
<td>21 mm</td>
<td>24 mm</td>
<td>1220 x 2440 mm</td>
</tr>
<tr>
<td>1.50 mm</td>
<td>21 mm</td>
<td>24 mm</td>
<td>800 x 2000 mm</td>
</tr>
<tr>
<td>1.50 mm</td>
<td>15 mm</td>
<td>18 mm</td>
<td>1220 x 2440 mm</td>
</tr>
<tr>
<td>1.50 mm</td>
<td>15 mm</td>
<td>18 mm</td>
<td>800 x 2000 mm</td>
</tr>
</tbody>
</table>

Our quality standards

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>UNIT</th>
<th>VALUE/RESULT</th>
<th>STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicat Softening Point</td>
<td>°C</td>
<td>83</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Charpy Impact SV</td>
<td>KJ/m²</td>
<td>23.52</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Tensile Impact</td>
<td>KJ/m²</td>
<td>828.7</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Heat Reversion</td>
<td>%</td>
<td>1.53</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Difference in reversion between individual faces</td>
<td>%</td>
<td>0.01</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Heat ageing Test at 150 °C, 30 min</td>
<td>-</td>
<td>No bubbles, cracks or visual delamination</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td>Mpa</td>
<td>2349</td>
<td>BS EN 12608</td>
</tr>
</tbody>
</table>

ARTIFICIAL WEATHERING TEST

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Irradiance: 0.55 W/m²</td>
<td>No visual change</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Temperature: 70 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hrs-Exposed, Light/Dark:14/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hrs Exposed: 544/430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xenon colour fastness</td>
<td>s L* = 94.51</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td></td>
<td>s a* = 0.83</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td></td>
<td>s b* = -2.11</td>
<td>BS EN 12608</td>
</tr>
<tr>
<td>Colour Fastness</td>
<td>Grey Scale</td>
<td>4 to 5</td>
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</table>
Since our operation was established in 1981, INTERPLAST CO. LTD. has grown with the UPVC Window, Door and Conservatory Market, developing a range of product that are designed and manufactured specifically to meet the market conditions in Middle East, Europe and Northern America.

DURAMAX PVC DOORS SYSTEM has gained enormous popularity in many countries as people recognize its advantages over conventional wood and metal doors. Distinctive in its elegant models, DURAMAX PVC DOORS offers extremely convenient operation with high impact strength and maximum noise reduction. The SYSTEM achieved all the test standards required in ISO 140 & ISO 717 for Acoustic Design Analysis and DIN EN ISO 179 for impact strength.

**Advantages**

- Abrasion Resistant
- High Impact Strength
- No cracks, crease Warp or Blister
- No Chalking or De-coloration
- Chemical Resistant
- Recyclable
- Built to last
- Termite proof
- Water Resistant
- Withstand all climates
- Quick & Easy Installation
- Fire Retardant

**Adjustable Extension**

- Jamb Frame
- Honeycomb
- PVC Skin 1.5 mm
- Re-Enforcement (Miranti Wood)
- Architraves Moulds
- Edge Lipping

Adjustable frame extension profile to suit the wall thickness.
Features

- 250 micron thick Lamination for External Doors.
- 140 micron thick Lamination for Internal Doors.
- Multi Polymer Acrylic finish.
- Long term Matt finish.
- Deep textured and/or smooth finish.
- Consistent color batch to batch and Wood Grain finishes.
- Permanent Bond without Delamination.
- Free of gloss lines.

Colours

- Golden Oak CPS - 02203 - 3
- Beige CPS - 02195 - 7
- Sapeli CPS - 02246 - 3
- Macoree CPS - 02235-5

*Request for actual colour samples.
**Concealed Fixing Detail**

- **S.S Screw with Rawl plug behind hinges**: [3 nos.]
- **Recommended fixing detail**

**Dimensions**

<table>
<thead>
<tr>
<th>Door Leaf (width)</th>
<th>Door Leaf with Jamb Frame</th>
<th>Structural Opening Required</th>
<th>Structural Opening Covered by Architraves</th>
</tr>
</thead>
<tbody>
<tr>
<td>cm</td>
<td>cm</td>
<td>cm</td>
<td>cm</td>
</tr>
<tr>
<td>70</td>
<td>79</td>
<td>80</td>
<td>82</td>
</tr>
<tr>
<td>80</td>
<td>89</td>
<td>90</td>
<td>92</td>
</tr>
<tr>
<td>90</td>
<td>99</td>
<td>100</td>
<td>102</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Door Leaf (Height)</th>
<th>Door Leaf with Jamb Frame</th>
<th>Structural Opening Required</th>
<th>Structural Opening Covered by Architraves</th>
</tr>
</thead>
<tbody>
<tr>
<td>cm</td>
<td>cm</td>
<td>cm</td>
<td>cm</td>
</tr>
<tr>
<td>210</td>
<td>215</td>
<td>216</td>
<td>218</td>
</tr>
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</table>
Accessories required for UPVC Door

MORTICE LOCK

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td></td>
<td>240</td>
<td>74</td>
<td>45</td>
<td>85</td>
</tr>
</tbody>
</table>

BUTT HINGES WITH BALL BEARING

<table>
<thead>
<tr>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>3&quot;</td>
<td>3mm</td>
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</table>

EURO CYLINDER KEY + KEY

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>70</td>
<td>30</td>
<td>10</td>
<td>NORMAL</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>25</td>
<td>10</td>
<td>BATHROOM</td>
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</table>

HANDLE
Lever on rose and euro profile cylinder escutcheon or lever on plate, centers 85 mm to suit the locking devices as mentioned above.
Quality Standards

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>1</td>
<td>Density</td>
<td>ISO 1183;1987</td>
<td>1.4 gm/cc</td>
</tr>
<tr>
<td>2</td>
<td>Yield Stress</td>
<td>DIN EN 527-2-1993</td>
<td>56 MPa</td>
</tr>
<tr>
<td>3</td>
<td>Yield Strain</td>
<td>DIN EN 527-2-1993</td>
<td>3.2%</td>
</tr>
<tr>
<td>4</td>
<td>Elastic Modulus</td>
<td>DIN EN 527 -2-1993</td>
<td>3105 MPa</td>
</tr>
<tr>
<td>5</td>
<td>Elongation at break %</td>
<td>DIN EN 527 -2-1993</td>
<td>199%</td>
</tr>
<tr>
<td>6</td>
<td>Tensile strength at yield</td>
<td>DIN EN 527-2-1993</td>
<td>46.2 N mm²</td>
</tr>
<tr>
<td>7</td>
<td>Tensile strength at break</td>
<td>DIN EN 527-2-1993</td>
<td>39.1 N mm²</td>
</tr>
<tr>
<td>8</td>
<td>Flexural Modulus</td>
<td>ISO 178 1993</td>
<td>2300 MPa</td>
</tr>
<tr>
<td>9</td>
<td>Impact Strength</td>
<td>DIN ISO 179</td>
<td>No break</td>
</tr>
<tr>
<td>10</td>
<td>Impact Strength</td>
<td>ISO 6603/2</td>
<td>38 Joule</td>
</tr>
<tr>
<td>11</td>
<td>Shore Hardness D</td>
<td>ISO 868</td>
<td>81</td>
</tr>
<tr>
<td>12</td>
<td>Vicat Softening Point</td>
<td>DIN ISO 306</td>
<td>78°C</td>
</tr>
<tr>
<td>13</td>
<td>Fire Performance</td>
<td>BS476 Part 7</td>
<td>Class 1</td>
</tr>
<tr>
<td>14</td>
<td>Fire Performance</td>
<td>BS476 Part 12</td>
<td>No Ignition</td>
</tr>
<tr>
<td>15</td>
<td>Weathering Performance</td>
<td>QUV/XENON</td>
<td>5 years</td>
</tr>
<tr>
<td>16</td>
<td>Water Absorption</td>
<td>ISO 62;1980</td>
<td>0.02% maximum</td>
</tr>
<tr>
<td>17</td>
<td>Application Temperature Range</td>
<td></td>
<td>-10°C + 45°C</td>
</tr>
<tr>
<td>18</td>
<td>Coeff. Linear Thermal Expansion</td>
<td>DIN 53752</td>
<td>0.83 x 10⁻⁴ K⁻¹</td>
</tr>
</tbody>
</table>
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DECODUCT® - Cable Management Systems
DECOPACK® - Flexible Packaging Materials
DECOFORM® - CUPS AND CONTAINERS
DURAMAX® - Cosmoplast
EDISON® - Electrical Accessories
INTERGARD® - Cable Protection Systems