

# **HDPE Sheet Materials**

## **DECORATIVE AND STRUCTURAL PANELS**

- UV stabilized for fade resistant outdoor use
- Will not rot, delaminate, splinter or crack
- Stain and graffiti resistant for easy cleaning
- Durable orange peel textured finish
- Moisture and chemical resistant
- High impact resistant
- Recyclable and non toxic
- Easily machined and engraved
- No heavy metals
- No phthalates

#### SHEET SIZES AND THICKNESS

Typical Sheets size: 1220mm x 2440mm

Available Thickness: 6mm, 12.5mm, 15mm and 19mm

Texture: Orange peel texture finish



Interior or exterior signage, environmental graphics, playground and recreational equipment, panels and components, sports panels and equipment, architectural elements, decking and platforms.







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High Density Polyethylene (HDPE) sheets are extruded and co-extruded thermoplastic materials that are used worldwide in the manufacture of panels and components for the Leisure and Recreation Industries. The versatile properties of this material, including UV stability, make it resistant to fading, moisture, weather, stain and graffiti. The perfect choice for outdoor environments.

HDPE is easily routed or engraved using current CNC technology, and is increasingly used across a wide range of industries and applications to replace timber and composite panel components. HDPE offers a softer, warmer and more play friendly feel to touch and it is 100% recyclable.

**DENSETEC DESIGN** - This is a thermoplastic sheet with multiple coloured layers. This is an idea panel choice for bright, colourful graphic panels and product designs, by routing the top colour layer and exposing the core colour.

**DENSETEC XD** - This is a similar material in terms of applications to the Design Panel above, but it features a post-industrial recycled black core, which has environmental advantages by using up off-cuts and also saves cost by relative weight. The black core creates a striking high contrast with the outer colours which gives it a vivid and fresh.

**DENSETEC SC** - Single Colour HDPE material, that can be used in many applications including design and graphic ones also. It can be used for structural panels or for coloured plant-ons, you can also engrave Densetec SC which give a more subtle graphic style.

**DENSETEC GRIP DESIGN** - This is a co-extruded, 2-colour sheet material primarily for use as decking and tread surfaces in the Marine and Playground industries. The addition of the 2nd colour enables the inclusion of important information for the visually impaired as well as branding and logo opportunities that can be permanently engraved into the surface. Densetec Grip Design features a heavy embossed top surface, with a slightly tacky, high coefficient of friction material on the walking surface.

**DENSETEC GRIP** - This is a co-extruded, single colour version of the Grip Design above, sharing the same heavy texture and tacky top surface. Often used for platforms, decking and tread surfaces where a walking or step surface is required.



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# **HDPE Fact Sheet**

## **DIMENSIONAL STABILITY AND SAFETY INFORMATION**

## SHEET DIMENSIONS: 2440mm x 1220mm (nominal) from stock

Other sizes available to order with an minimum order quantity of 2500 Kg or 5000 Kg per size option dependant on colour

### SHEET THICKNESS: 6mm, 12.5mm, 15mm and 19mm (nominal) from stock

Other thickness available to order with a minimum order quantity of 2500 Kg or 5000 Kg per size option dependant on colour

**COLOURS:** Over 50 colour/thickness options available from stock Special colours are available with a minimum order quantity of 5000 Kg

**SURFACE FINISH:** Orange peel texture

## UV STABILITY: Manufactured with a standard 5 year UV protection package

The HDPE materials typically contain .10% Antioxidant and .40% UV stabilizer in the final product. Based upon the manufacturers recommendations as well as our own experience with stabilization of polyolefin materials, we would expect this to give you a 5 year protection level dependant upon the conditions where the product is used.

**EXPANSION:** The coefficient of thermal expansion for HDPE materials is approximately 1.5mm per metre, per 10 degrees C

### **SHEET FLATNESS:** In full sheet form

The tolerance for this is approximately 2.62mm per metre. This same tolerance would apply to cut pieces of single or two colour machined panels that do not have the skin roted on one side.

## **SHEET FLATNESS:** After machining a panel

If you are machining a single or 2-colour panel on only one side, we would not be able to guarantee any type of flatness tolerance, as this may vary due to the depth of cut and the amount you are routing out of one side. Essentially the deeper you route and the more area you rout out of one side, the more the panel can distort. It generally helps if both sides of a panel are routed evenly both in material removed and depth of the cut.

## **PIGMENTS:** None of our pigments contain heavy metals

We do not stock any colours that contain heavy metal substances including Lead added to these products during the manufacturing process. The raw materials used have been tested utilizing X-ray Fluorescence (XRF) and have found that they contain less than 20 ppm total heavy metals. Thus are considered <u>FREE OF LEAD HAZARD</u> as defined by 16CFR 1303 ban of Lead-Containing Paint and certain consumer products banning Lead-Containing paint.

#### **PHTHALATES:** None of our materials contain Phthalates

We do not source or stock sheets that are manufactured from raw materials that contain any of the substances listed below, nor are any added during the manufacturing process. Therefore our products are considered FREE OF PHTHALATE HAZARD as defined by the Consumer Product Safety Improvement Act of 2008 and the California Health and Safety Code, Section 108935-208939 Stats.2007 C.672,A.B.1108

benzyl butyl phthalate (BBP), dibutyl phthalate (DBP) di-(2-ethylhexyl) phthalate (DEHP), diisodecyl phthalate (DIDP), diisononyl phthalate (DINP) di-n-octylphthalate (DnOP)