

Product: High Molecular Weight High Density Polyethylene**GENERAL DESCRIPTION****Polymer: HMWHDPE**

In general Polyethylene as a thermoplastic material shows outstanding toughness, ease of processing, chemical resistance, abrasion resistance, electrical insulation properties, impact resistance, low coefficient of friction, and near- zero moisture absorption. It can be thermoformed, welded, and machined. High Density Polyethylene is more rigid than lower density materials, also having higher tensile strength, four times that of low-density polyethylene, and three times better compression strength.

APPLICATIONS

- Vacuum forming applications
- Pallet & tray thermoforming
- Chemical resistant tanks & containers
- Cylinder fabrication
- Storage containers
- Corrosion resistant work surfaces
- Moisture barriers
- Man-hole covers in Chemical plants
- Self-supporting containers
- Prosthetic devices
- Slip sheets

INCLUSIONS

Corex extruded HDPE is available with:

- Laminated Identification striping – colour coding
- Foam lamination
- Embossed pattern

PRODUCT PARAMETERS

GAUGE	2.5mm – 9mm
LENGTH	to 3000mm
WIDTH	to 2200mm
COLOURS	On application
EMBOSSING	On request

Find out more at corex.com.au

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PROPERTY (TYPICAL VALUE)	UNIT	VALUE	TEST METHOD
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OPTICAL

Density	g/cc	0.949	ASTM D1505
HLMI, Condition 190/21.60	g/10 min	10	ASTM D1238
ESCR			
Condition A (100% Igepal), F ₅₀	h	>600	ASTM D1693
Condition B (100% Igepal), F ₅₀	h	>600	ASTM D1693

MECHANICAL & PHYSICAL

Tensile Yield Strength (2"(50mm) per min	MPa	25	ASTM D638 Type IV
Ultimate Elongation (2"(50mm) per min	700%	%	ASTM D638 Type IV
Brittleness Temperature	°C	<-70	ASTM D746
Flexural Modulus	MPa	1172	ASTM D790
Compressive strength (min.)	MPa	10	Tested 150mm samples up to 10KMpa with no discernible evidence of compression or degradation

THERMOFORMING

Sheet Sag***	cm	8-13
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PROCESSING RECOMEDATIONS

Blow Molding Stock Temperature	°C	188-232
Extrusion Melt Temperature	°C	232-268
Thermoforming Surface Temperature	°C	154-182

DIMENSIONAL TOLERANCE

THICKNESS	Nominal thickness ± 5%
LENGTH	Nominal length plus 1.6%
WIDTH	Nominal width +4mm -0

COMPATIBILITY: Welding over molding

HDPE is Compatible will all Polyolefins such as LDPE, VLDPE, TPE, TPV
HDPE can be heat / seam welded and over-molded to all Polyolefins with excellent bonded strength



High Density Polyethylene Sheet

This data sheet contains typical values resulting from the stated test and is subject to nominal variation.

Where orientation affects the numerical value, the tests have been conducted in the machine direction.

For further information or enquiries regarding this data, please contact:

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* Physical properties reported herein were determined on compression moulded specimens prepared in accordance with Procedure C of ASTM D1928

** Test conditions: 10 ounce, 23g bottle, 10% fill Orvus K Detergent

*** 2 ft x 4 ft x 125 mil (0.61m x 1.22m x 3.2mm) thick blank heated to forming temperature

The nominal properties reported herein are typical of the product but do not reflect normal testing variance and therefore should not be used for specification purposes.

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