

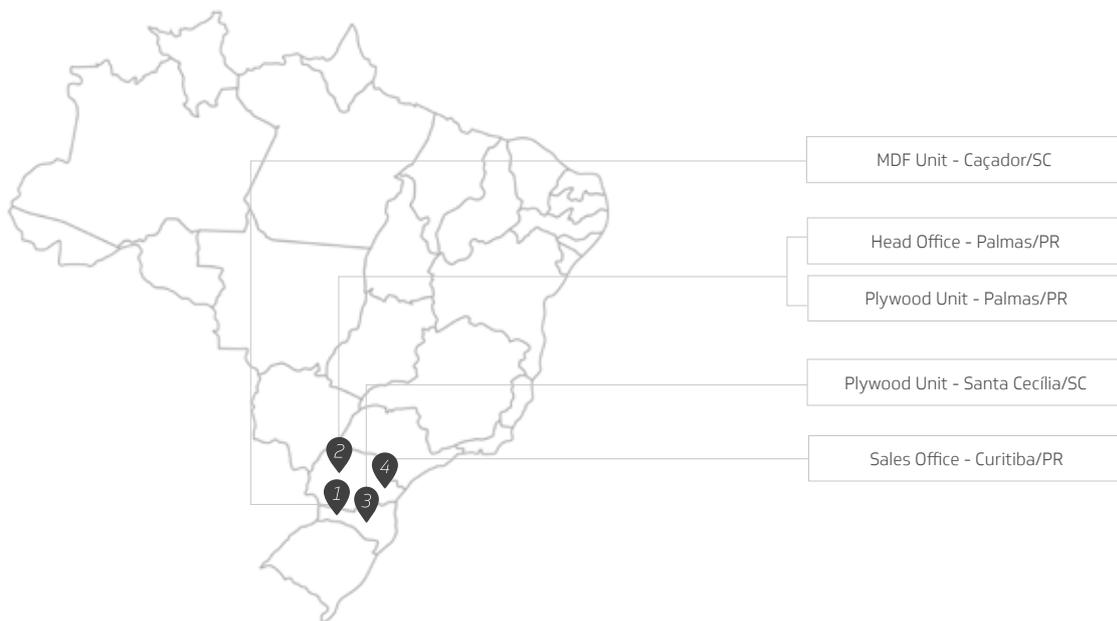


 **Guararapes** MDF

*Product Catalogue*



# Business Units



Guararapes is a Forestry Company, founded in 1984, began to operate as a small veneer manufacture, producing 150m<sup>3</sup> per month. In 1986, Guararapes started up the first Plywood Plant and keep focused on export.

After 31 years Guararapes has more than 1800 employees and is one of the largest Plywood producers in South America, with an annual output of over than 300,000 thousand cubic meters of Plywood.

Currently, the MDF plant has an annual output of 200,000 cubic meters and with the startup of the brand new state of the art MDF line, on February 2016, the total MDF Capacity will reach more than 600.000 thousand cubic meters an year. Considering the total capacity of Plywood and MDF of 900.000 m<sup>3</sup> per year, Guararapes is one of the majors wood based panel producers in Brazil.

# Commitment to Environment

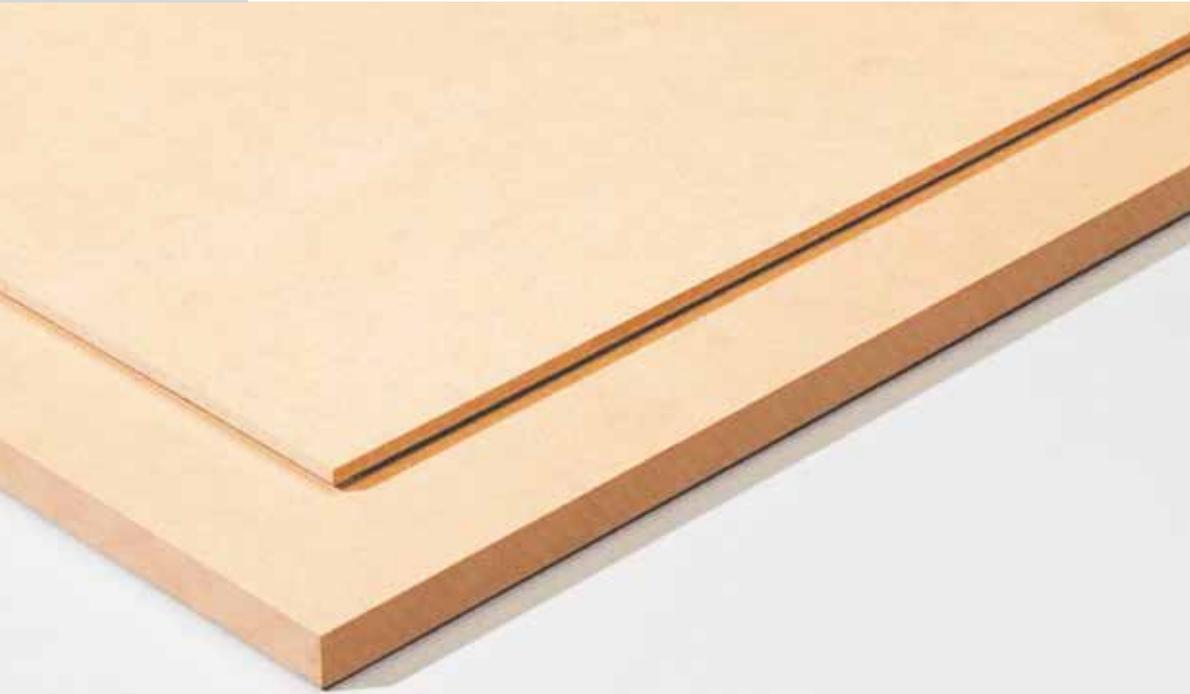


Guararapes currently has more than 17.000 hectares of lands, with more than 12.000 hectares of pine plantation, partially FSC® certified (Forest Stewardship Council), that assures that the wood used in the manufacturing of its products comes from its own forests managed in a way that's environmentally correct, economically viable and socially responsible and other controlled sources.



# MDF Standard

Guararapes MDF is an excellent substrate, very smooth, stable, offering superior surface quality and great machinability.



## Dimensions

		THICKNESSES			WIDTH	LENGTH			THICKNESSES			WIDTH	LENGTH
<b>THIN</b>	inch	7/64"			4' - 6'	9'	<b>THIN</b>	inch	1/4"			4' - 6'	8' - 9'
	mm	2,8 mm			1220 - 1850	2750		mm	6 mm			1220 - 1850	2440 - 2750
		THICKNESSES					WIDTH	LENGTH					
<b>MDF STANDARD</b>	inch	11/32"	15/32"	19/32"	23/32"	31/32"	4' - 6'	8' - 9'					
	mm	9 mm	12 mm	15 mm	18 mm	25 mm	1220 - 1850	2440 - 2750					

\* Other thicknesses and sizes available upon request

## Advantages

- High surface density
- Homogeneous core
- Great machinability
- Uniform light color

## Applications

- Furniture and Interior Design
- Cabinets, Doors, Moldings
- Laminating
- Handcraft

This is a light weight medium density fiberboard. The result is a lighter weight panel with a homogeneous surface and excellent finish sanding. Because our fiber process does not allow the mixing of fiber species during production, GUARARAPES Lite has a uniform light color and consistent density profile.

# MDF Lite



## Dimensions

		THICKNESSES					WIDTH	LENGTH
MDF LITE	inch	11/32"	15/32"	19/32"	23/32"	31/32"	4' - 6'	8' - 9'
	mm	9 mm	12 mm	15 mm	18 mm	25 mm	1220 - 1850	2440 - 2750

\* Other thicknesses and sizes available upon request

## Advantages

- Light color
- Light weight
- Great machinability
- Extended tool life
- Versatility

## Applications

- Furniture and interior design
- Moldings
- Baseboards



# MDF Melamine

Guararapes Melamine Collection offers more than 47 contemporary colors, inspired by different designs and textures that fill the senses with new perceptions with every touch. The physical properties include durability, hardness, scratch and stain resistance as well as color stability.



## Dimensions

MDF MELAMINE	THICKNESSES					WIDTH	LENGTH
	inch	1/4"	19/32"	23/32"	31/32"	6'	9'
mm	6 mm	15 mm	18 mm	25 mm	1850	2750	

\* Other thicknesses and sizes available upon request

## Advantages

- Attractive collection
- Different colors inspired by nature, Fabrics and fashion
- 4 different textures

## Applications

- Furniture and Interior Design
- Cabinets
- Doors

# Melamine Collection



## Metalic \_\_\_\_\_



Corten Cobre Ônix Oliva Berinjela

## Dual Touch \_\_\_\_\_



Dual Black Dual Blanc Porto Elmo Dubai Lisboa Paris Pretória Marrocos Alabama

## Comfort \_\_\_\_\_



Milano Papyrus Canovas Nevada Fendi Preto Silk Branco Iceland Santorini

## Naturale \_\_\_\_\_



Bilbao Nairobi Avelã Cioccolato Antiqua New Cherry Cipres Jauzi



Nogal Champagne Teka Bianco Nogal Gris Andorra Nogal Sevilha Carvalho Terrazo Sawcut Carvalho Decapê

## Essence \_\_\_\_\_



Carvalho Nassau Linho Nogal Malbec Wengue Natural

## Solid colors \_\_\_\_\_



White Black Grey Crystal Grey Light Beige



The Metallic, Comfort and Dual Touch Collection has the NanoxClean™ protection that guarantees 99.9% antimicrobial protection against germs, bacteria and other microorganisms.

Its antimicrobial action makes the contact surfaces and products permanently free from invisible threats of everyday's life. Built by modern processes, the product presents no toxicity and contributes to a healthy environment.

## PHYSICAL / MECHANICAL PROPERTIES

# MDF Standard

EXPERIMENT	STANDARD	UNIT	METRIC			IMPERIAL			
			THICKNESS (mm)			UNIT	CUSTOMARY (inch) THICKNESS		
			2,5 to 6	7-22	25-30		3/32" - 1/4"	3/8" - 3/4"	1" - 1 3/16"
THICKNESS TOLERANCE	EN 324/ASTM 1037	mm	+/- 0,15	+/- 0,15	+/- 0,15	INCH	+/- 0,005	+/- 0,005	+/- 0,005
DENSITY	EN 323/ASTM 1037	Kg/m³	740 - 860	680 - 760	670 - 730	LB/Ft³	46 - 54	42 - 47	42 - 46
INTERNAL BOND (IB) AVERAGE	EN 319/ASTM 1037	N/mm²	0,76 - 0,90	0,70 - 0,90	0,60 - 0,90	PSI	110 - 131	102 - 131	102 - 131
MINIMUM IB (*)	EN 319/ASTM 1037	N/mm²	600	600	550	PSI	87	87	80
MOISTURE CONTENT	EN 322/ASTM 1037	%	5,5 - 10,5	6,0 - 10,5	6,0 - 10,5	%	5,5 - 9,8	6,0 - 10,5	6,0 - 10,5
MOE	EN 310/ASTM 1037	N/mm²	2000 - 3000	2400 - 3000	2000 - 2800	PSI	290,075 - 435,090	348,072 - 435,090	348,072 - 406,084
MOR	EN 310/ASTM 1037	N/mm²	30 - 45	28 - 37	26 - 32	PSI	4,351 - 6,527	4,061 - 5,366	4,061 - 4,641
WATER ABSORTION 24 HRS	EN 317/ASTM 1037	%	< 30	< 20	< 20	%	< 30	< 20	< 20
THICKNESS SWELLING 24 HRS	EN 317/ASTM 1037	%	< 22	< 10	< 10	%	< 22	< 10	< 10
EDGE SCREW	EN 320/ASTM 1037	N	-	> 850	> 850	LB	-	> 191	> 191
FACE SCREW	EN 320/ASTM 1037	N	-	> 1050	> 950	LB	-	> 236	> 236
EMISSION HCHO E2	EN 120	mg/100 gr	> 8 ≤ 30	> 8 ≤ 30	> 8 ≤ 30	mg/100gr	> 8 ≤ 30	> 8 ≤ 30	> 8 ≤ 30
EMISSION HCHO E1	EN 120	mg/100 gr	< 8	< 8	< 8	mg/100gr	< 8	< 8	< 8
EMISSION HCHO CARB 2	ASTM D6007	ppm	< 0,13	< 0,11	< 0,11	ppm	< 0,13	< 0,11	< 0,11
SIZES (**)		mm	1220 X 2750	1220 X 2440	1220 X 2440	ft	4' X 9'	4' X 8'	4' X 8'
LENGTH & WIDTH & SQUARENESS TOLERANCES		mm/m	+/- 2	+/- 2	+/- 2	INCH/ft	+/- 0,08	+/- 0,08	+/- 0,08

(\*) It accepts more than a single value above the minimum value is always defined as the value of IB average value meets the specification.

(\*\*) Other thicknesses and sizes available upon request.

## PHYSICAL / MECHANICAL PROPERTIES

# MDF Lite

EXPERIMENT	STANDARD	UNIT	METRIC		IMPERIAL		
			9 -24	25-30	UNIT	3/8" - 3/4"	1" - 1 3/16"
THICKNESS TOLERANCE	EN 324/ASTM 1037	mm	+/- 0,15	+/- 0,15	INCH	+/- 0,005	+/- 0,005
DENSITY	EN 323/ASTM 1037	Kg/m³	615 ± 25	615 ± 25	LB/Ft³	39 ± 2	39 ± 2
INTERNAL BOND (IB) AVERAGE	EN 319/ASTM 1037	N/mm²	0,60 - 0,70	0,60 - 0,70	PSI	87 - 102	87 - 102
MINIMUM IB (*)	EN 319/ASTM 1037	N/mm²	0,5	0,5	PSI	73	73
MOISTURE CONTENT	EN 322/ASTM 1037	%	6,0 - 9,8	6,0 - 9,8	%	6,0 - 9,8	6,0 - 9,8
MOE	EN 310/ASTM 1037	N/mm²	2200 - 2800	2200 - 2800	PSI	87,024 - 101,521	87,024 - 101,521
MOR	EN 310/ASTM 1037	N/mm²	28 - 36	28 - 36	PSI	4,061-5,221	4,061-5,221
WATER ABSORTION 24 HRS	EN 317/ASTM 1037	%	< 22	< 12	%	< 12	< 12
THICKNESS SWELLING 24 HRS	EN 317/ASTM 1037	%	< 9	< 5	%	< 5	< 5
EDGE SCREW	EN 320/ASTM 1037	N	> 800	> 800	LB	> 180	> 180
FACE SCREW	EN 320/ASTM 1037	N	> 1000	> 1000	LB	> 225	> 225
EMISSION HCHO E2	EN 120	mg/100 gr	> 8 ≤ 30	> 8 ≤ 30	mg/100gr	> 8 ≤ 30	> 8 ≤ 30
EMISSION HCHO E1	EN 120	mg/100 gr	< 8	< 8	mg/100gr	< 8	< 8
EMISSION HCHO CARB 2	ASTM D6007	ppm	< 0,11	< 0,11	ppm	< 0,11	< 0,11
SIZES (**)		mm	1220 X 2440	1220 X 2440	ft	4' X 8'	4' X 8'
LENGTH & WIDTH & SQUARENESS TOLERANCES		mm/m	+/- 2	+/- 2	INCH/ft	+/- 0,08	+/- 0,08

(\*) It accepts more than a single value above the minimum value is always defined as the value of IB average value meets the specification.

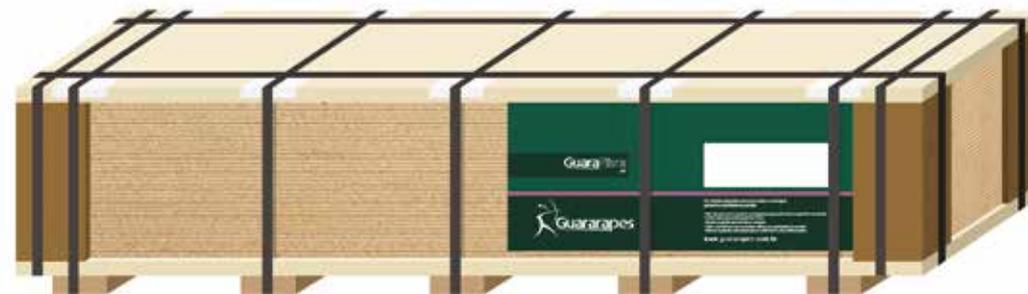
(\*\*) Other thicknesses and sizes available upon request.

# Melamine Properties Surface



PROPERTIES	TESTING METHODS	UNIBOARD® MEETS TESTING REQUIREMENTS
WEAR RESISTANCE	NEMA LD 3-2005	400 CYCLES (SOLID COLORS) 125 CYCLES (PRINT)
APPEARANCE	NEMA LD 3-2005	NO SURFACE DEFECTS
STAIN RESISTANCE	NEMA LD 3-2005	1-10 NO EFFECTS (SOLID COLORS) 11-15 MODERATE (PRINT)
CLEANABILITY	NEMA LD 3-2005	MAX 20
LIGHT RESISTANCE	NEMA LD 3-2005	SLIGHT
HIGH TEMPERATURE RESISTANCE	NEMA LD 3-2005	SLIGHT
RADIANT HEAT RESISTANCE	NEMA LD 3-2005	NO EFFECT AFTER 60 SECONDS
BOILING WATER RESISTANCE	NEMA LD 3-2005	NO EFFECT
IMPACT RESISTANCE	NEMA LD 3-2005	381 mm/m 15'

## Packaging Characteristics



PANEL SIZE	NOMINAL THICKNESS	CUSTOMARY THICKNESS	PIECES PER CRATE	NET VOLUME PER CRATE	GROSS WEIGHT PER CRATE
2.750 mm X 1.220 mm	2.8 mm	7/64"	285	2,677 m <sup>3</sup>	2276 Kg
2.440 mm X 1.220 mm	06 mm	1/4"	150	2,679 m <sup>3</sup>	2210 Kg
2.440 mm X 1.220 mm	09 mm	11/32"	100	2,679 m <sup>3</sup>	1969 Kg
2.440 mm X 1.220 mm	12 mm	15/32"	75	2,679 m <sup>3</sup>	1942 Kg
2.440 mm X 1.220 mm	15 mm	19/32"	60	2,679 m <sup>3</sup>	1916 Kg
2.440 mm X 1.220 mm	18 mm	23/32"	50	2,679 m <sup>3</sup>	1875 Kg
2.440 mm X 1.220 mm	25 mm	31/32"	36	2,679 m <sup>3</sup>	1795 Kg



## Declaration of Performance

According to the regulation (EU) Nr. 305 of the European Parliaments and of the Council of 09. March 2011



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