



Panel Primer: What Every Woodworker Should Know

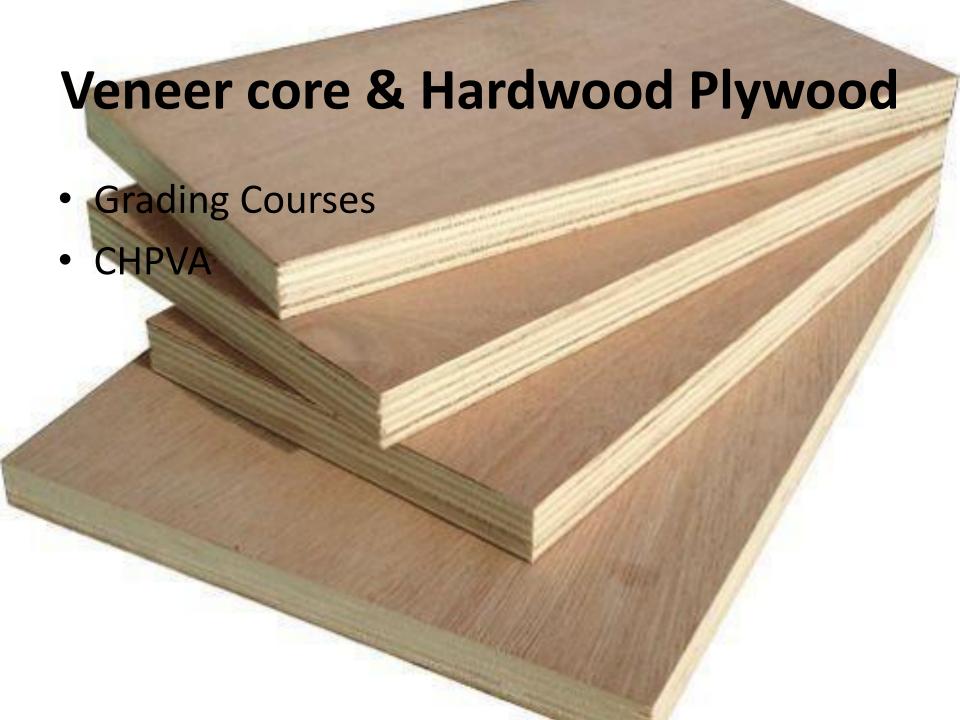
Mike Rolston
Regional Sales Manager
Uniboard Canada

THE PANEL INDUSTRY

- Veneer core and Hardwood Plywood
- Particleboard
- MDF
- TFL (Thermally Fused Laminate)
- Supporting Products
- Certifications & Regulatory Environment









- Standards....
- Density, MOE, MOR, Screw Hold
- M-S (RTA)
- M-2 (Traditional)
- M-3i (Office, Institutional)
- LD-1 (Doorcore)
- LD-2 (Doorcore)
- FR (Fire Rated)
- NAF ULEF (Formaldehyde)

Particleboard

Specific characteristics to serve the needs of every manufacturer.

MDF

MEDIUM DENSITY FIBERBOAD

Standards.....

Density, MOE, MOR, Screw Hold...

The best substitute to solid wood for painting,

laminating, and machining.

- GRADES
- 115 (Standard,, Custom..)
 - Hardwood Plywood
- 130 (The norm....)
 - Mouldings
 - Cabinetry
 - Doors
- 155 ('Plus')
 - Paint grade cabinets and doors
 - Wrapped mouldings
- FR (Fire Rated)
- NAF ULEF (Formaldehyde)

TFL

Perfect for retail, residential and institutional projects.. TFL can offer the design, consistency and quality needed to make any space functional, and complete.

Thermally Fused Laminate

- Cabinetry
 - Shelving
 - Office Furniture
 - Store Fixtures
- Residential Furniture



Dolomite[®]

- Often called a basic finish,
 Dolomite offers a medium
 reflective quality that hides
 fingerprints and wear over the
 long-term.
- It works well with all kinds of projects.



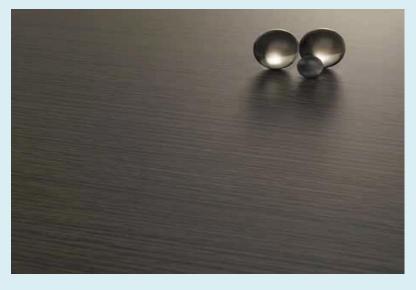
Bistro[®] (Woodgrain)

 The contemporary linear wood grain of this finish accentuates the look and feel of real wood in all its subtlety.



High Gloss

 This smooth, mirror-like specialty finish adds shine to your decor. It lends an elegant and stylish look to any colour.



Supermat[®]

 Playing with depth perception, this smooth matte finish is prized for the light touch it adds to any room.



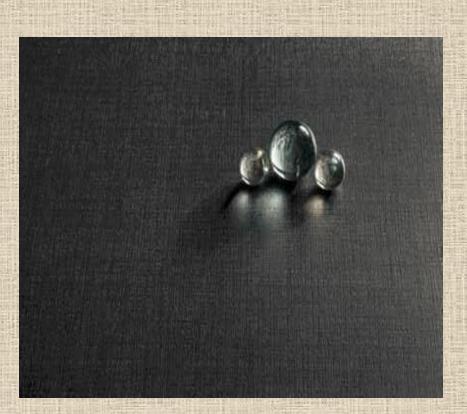
Aura (Multiple Gloss)

 Aura features a complex wood grain and a low-lustre polish that mimics real wood. The soft touch of this finish is perfect for horizontal applications, especially office furniture. It is well-liked for its versatility.



Sequoia (Deep Grain)

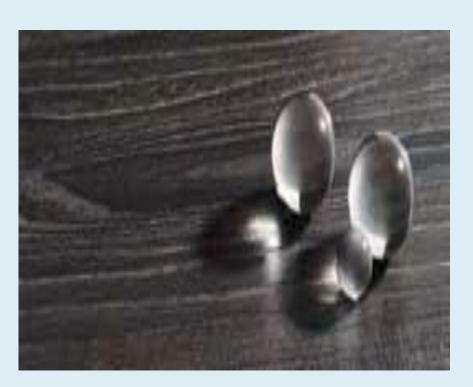
 The new Sequoia finish is characterized by a deep relief that provides a pronounced 3D visual.



Linen (Fabric Woven)

- Like a linen fiber, the Calico finish provides all the softness and versatility of a woven material.
- Calico has a chic touch that can suit any decorating project.

Synchronized Textures

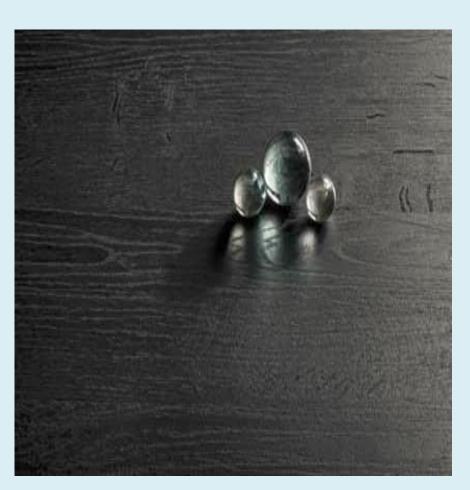


Brushed Elm (Synchronized Wood)

WOODPRINT DUO TECHNOLOGY™

The matte-oiled surface replicates hours of handpolishing, emphasizing the wood's natural cathedral patterns and crossgrain features.

Synchronized Textures



RIVIERA OAK (Synchronized Wood – Multiple Gloss)

WOODPRINT DUO TECHNOLOGY™

The Riviera Oak finish is the newest texture created by synchronization and gloss levels.

Pushing the boundaries of the likeness of a real wood texture.



- HPL
- EDGEBANDING
- 3DL
- MOULDINGS
- DOORS
- SLATWALL



CROSS REFERENCE CHARTS

integra®dst

INTEGRA CROSS-REFERENCE SHEET

Feuille d'équivalences Integra

Section Sect		Available finishes Finis Disponible	HPI	L	Link 25					dgebanding ndes de Chant							3D Laminate HERMOPLASTIQUE					MOLDINGS	SLAT
The section of the se	olour Collection	Finis Disponible							81			_			_								
Anti-property	standard		Formica	Uniboard	Olon	Canplast	Olon	DuraEdge*		Richelieu	Dolken	Rehau	Omnova	SSI / Klockner	Riken	LG Hausys	Alfatherm	Renolit	Synergy	Dackor	Ambtra	Olon	Vizūs
Service Servic	er Blanc/Super White					1498-9		7001TX					508701	05/1280	_			9365-151					
Company Comp	nde/Almond	D, offi		_		1543.0	PU123					CP600515		75/3902	-			1700-084		_		P0123M	_
The second property of the control o		D OM	00136	_			1.0000					C600513		75/6904	+			1399-064				DOTESTA	-
THE PARTY OF THE P	eier Bourbon/Bourbon Cherry	D, om	OU204	_		56025TI		2406T	P204	C204	4904	0000013		73/0004	R204							P204X	_
THE PROPERTY OF THE PROPERTY O	sier Tabac/Tobacco Cherry	D	OLI205					2405T	P205	C205	4905		508639		R205							P205X	_
THE PROPERTY OF THE PROPERTY O		D	OU206							C206	4906							1282001-043					
See	sier Choco/Choco Cherry	D	OU207				P0207	2409T	P207	C207					R207							P207X	
14 Lyen from the layer of the l	sier Rubis/Ruby Cherry	D	OU221			57602TL				C221	5266		508888						GC 806				
## Company Com	ace/Audacity	D, HG, RI	OU241				P0241	4250T	P241	C241		CP60117										P0241X	
Controller State 1	le Lever de Soleil/Sunrise Maple	D	OU262	_		58518TL		2915T	P262	C262	3127	_	E00074	AB/0213	-	MW01903		42728 2188002-050	CLG 183				-
Controller State 1	de Classique/Classic Mante	D	OU263	_		_	D0290	29161 4200T	P203	C263	5120	_	508871	AB/0209	-	E7011.030		42/40 320/002-060	_			Bosony	-
The second processes of the control	c Classique/Classic White	D	OU300	_		_	F0230	42001	F230	C280		_		05/1080	_	F28119030						FUZUUA	_
The Property of the Control of the C	colat Classique/Classic Chocolate	D	OU313	_			P0313	4219T		C313	3048	_		00/1000	_	MP424-03						P0313X	-
The following the control of the con	ou Sapelli/Sapelli Mahogany	D				7295TL		8672T	P385	C385	3873		508663		1								
A SAME CAMPAGE AND A SAME CAMPAG	ne Finlandais/Finnish Oak	D	OU388							C388													
Marche M	c Arctique/Arctic White	D	OU505			1498-9							508591	03/1580				9291-084					
*** A SAMPLANDAMON OR **** O.	io/Cocoa	D	OU510							C510									CP 225				
THE PROPERTY OF THE PROPERTY O						CP-055904						_			-			3226001-050				P0611X	-
The Control of Control		D, BI	OU513	1		I	P0513	8384		C513	8064	1	I	1	1					Sandbank		P0513X P0513N	-
The stands and stands and stands are stands and stands and stands and stands are stands and stands are stands and stands are stands are stands and stands are stands	sier Cosmique/Cosmic Cherry	D	OU515	_				2298	P515	C515	8066	_			_							FUUTUN	_
Miller M	e sucré / Sweet Beige	D	OU520	_				8163T	1	C520	9301	_			_								_
The Property of the Control of the C	Blanc/NovaWhite	D, HG ,RI ,AU	OU555			1498-9		7001TX	P417	T555	2027ST	C100206	508560				WL1458						
Character (See 1967	aBlanc OB/NovaWhite BE	ОВ																					
The Manufactory Mayer A	ne d'Hiver/Winter Oak	D				56523TL		8541T	P557	C557													SLTW
The property of the control of the c	Classique/Classic Black	D	OU631								2416				-								
See See Control (1987)	te Naturet/Bryan Maple	D BI	00687	_		5191TL		8435T		C687	3882	_	E00000		-					_			-
The final property of the control of		D, BI	OU744	_		5661171		ADAAT		P744	3049	_			D745								-
a Change Agriculation (Cont.) - Cont. Cont.	ance/Flegance	D, D.	OU748					4268T		P748	3051	_											-
*** white-files line***	ne Ombragé/Shadow Oak	D	OU762			56496TL		1130T	P762	C762	4599		000001		R762								_
*** white-files line***	e d'Érable/Sugar Maple	D	OU764							C764			508837										
*** white-files line***	o à l'Érable/Port Maple	D	OU765					8667T		C765	5170							3210002-060					
Company Comp		D	OU766			56500TL		1128T	P766	C766	4346				R766			3210003-060					
Each Milling Gings	e White/Blanc Blanc	D, BI, HG, RI	OU777				L0984	7099T	_		2022									Chicky White		L0984B	
Othersperior Service Control of the	Siam/Siam Teak	D	OU785					1151T		C785	5736			70.000	-								-
Common	Saule/Willow Grey	D, SM	OU802	_	_	4000.0	D0431	70701	P802	CB02	2422	C200613	E00E40	75/8101	_			7005 433				P0802M	-
See Antique Antique Within	mare		OU807	_	_					C807		C600512			_								-
Lugaring direct and provided states and provided states are provided as a provided state and provided states are provided as a provided state and provided states are provided as a provided states are provided	c Antique/Antique White	D. HG.RI	QU810	_		1578TI	1.0994		P810	C810	2115	_	508599	03/1250	_	YFH3759		1458-084				L0994X	_
Part	Lingot/Ingot Grey	D	OU828							C828													
Section Company Comp	ou Urbain/Urban Mahogany	D	OU838					1156T	P838	C838	3053												
Image	aNoir/NovaBlack	D, RI	OU888			1005-9		7003TX			2416		508610	95/2500		KD904PG		9920-084					
ref Element Forcew Walnut D	nde N-Angleterre/N. Eng. Almond	D	OU920			1543-9		7002TX	P920	C920	2114			15/8608	_								_
Maintender Mai	num	D	00934					13551	P934	C934	6464	_			-								-
an Perf	pinium/Stainless	D MG	OU938	_		generi		11001		C936		_	500000	MEMMOS	-			9659.226		_			-
### Part	o/Port	D, FFG		_				8667T				_			R965			3030-223					-
Package Pack	n/Pear	D						1042T	P971	C971	5795			KB/1109	11000			3196012-150	PW 463				-
Fund of Management (1997)	le Hardrock/Hardrock Manie	D	QU992			7500TL		1195T/2410T	P992	C992	4901				1	U0101-03			NM 101				
Post	ime Chocolat/Chocolate Apple	D	OUE19					2273			5650		508868	AB/0211				44346	DT 228				
PROTTY P	ours de Wenge/Velvet Wenge	D	OUG15					4464		CG15	4070		518243										
amelinCarametria D. B. Hd, RI OUG1	ne Milano/Milano Oak	D	OUG16				DPG16	8669		CG16	4071							43568-1723	MO 798			P0G16N	
Bear Color	jio/Grigio	D, BI, HG, RI	OUG17				DPG17	8452		CG17	4072	CP40797										P0G17N	-
Purplement D. CA				_		_			-			CP20704			_				_				_
re VineYin Walnut D. B. HG OLOGI P. G. COCI 4098AA R. MacWilliam Walnut D. B. HG OLOGI P. COCI 4098AA R. MacWilliam Walnut D. B. HG OLOGI P. COCI P.	Pur@heer Linen	D. CA	OUG20	_				8764	_	CG20	6448	SF20704			_							PG20WV	_
Recommendate	er Viva/Viva Walnut	D. Bl. HG	OUG21			CP-055907		8901	_	CG21		_			_			1				. 020117	_
No.	c Ruban/Ribbon White	D. RI. HG	OUG22					8686		CG22													
No. Prince Prin	e de la Côte/Coastal Pear	D. HG	OUG23					8807		CG23	4736	CP20707											
No. Concession	no Tabac		OUG50			CP-055908				WBG5002022													
Montagen procedure Mount Date M. M. M. O. O. O. O. O. O	no Păle/Legno Light	BI, RI	OUG51	_		CP-055909		2739WG-4H	_				_		_	_							
Montage Mont	no Fonce/Dark Oak	DI, MI		_					+			_			-			-					_
CP-0502	Montagna foncé/Dark Mount Oak	BI MG DI		_					-			_		EU1305 941	-								_
Part	cia	BI	OUG63	_		CP-055921		8147 WG-4H	_			_		24 1000 041	_	UQ601R5							_
PRODUCT PROD	bier Gingembre/Gingersnap	D																					
OB		ОВ	OUH50	HPL H50**	PH50V			4564WG1		WBEH50	8754E5-1518-1						W824/06					PSH50V	
Press	ara		OUH51	HPL H51**	PH51V		PSH51V	4560WG1		WBEH51	8755E5-1520-1						W824/04					PSH51V	
Color Colo																		429/03-8018					
	dré/Ember																	90429017-101200					
PHOSE PHOS	times / Mustin								-		8758E5-1518-1				-			90429016-101200					_
mel·Naze AU OU-67 PH57R 457902 VAURAH67 8767*15601 CH40955 PH57R 457902 PH5	ciquer mystic			HPF MSS**			PamadV		-			CP40959			-		W624/U3	4291002-8018				PSMSSV	_
Price Pric			OUH57	_	PHSZP	_		4509WG2	_	WAURAH57	8761Y-1540-1	CP40955			_							PH57R	_
precule**Priligh** AU Out-50 Pt-50R 4579VQ2 VVA/RAH-99 8761V-150-1 CH-0966 Pt-50R 4579VQ2 VVA/RAH-99 8761V-150R 4579VQ2 VVA/RAH-99 8761VQ2 VVA/RAH-9	péte/Storm				PH58R				_						_							PHS8R	_
c (Lassique/Classic Spice D OU+60 457026 VH+6001622 8764 D gue RI OU+61 2514W05-2 8765 CP40964 R ora SM OU+62 457528 VH+910222CA 8764 R ora SM OU+62 457528 CH-507822 6544 R ora SM OU+63 PH-648 45742B CH-507822 6546 CP20799 bit RI OU+65 PH-668 25700051 VHH602022 8767 CP40902 bit RI OU+65 PH-668 35000051 VHH602022 8767 CP40902 bit RI OU+66 PH-668 35000051 VHH602022 8767 CP40902 bit RI OU+66 PH-668 35000052 WH602022 8760 CP40902	puscule/Twillight								-						-							PH59R	-
ora 9M OUH62 45763.5 CH6201622 6541 algoratement 0 OUH63 PH646 4577605.1 WBH640222 8766 CP20799 Is R OUH64 PH646 4577605.1 WBH640222 8766 CP20799 N OUH65 PH646 4577605.1 WBH640222 8766 CP20799 N OUH66 PH646 4577605.1 WBH640222 8766 CP20799	e Classique/Classic Spice	D	OUH60					4575DB			8764	0. 10000											
ora 9M OUH62 45763.5 CH6201622 6541 algoratement 0 OUH63 PH646 4577605.1 WBH640222 8766 CP20799 Is R OUH64 PH646 4577605.1 WBH640222 8766 CP20799 N OUH65 PH646 4577605.1 WBH640222 8766 CP20799 N OUH66 PH646 4577605.1 WBH640222 8766 CP20799	gue	RI	OUH61					2614WG5-1		WBH6102022CA	8765	CP40964											
to RI OU-64 PH-68 4577W5-1 WBH-602022 8766 CP20760 PH-68 RI OU-65 PH-66 26 WW5-5 WBH-602022 876 CP20760 PH-68 RI OU-65 PH-66 26 WW5-5 WBH-602022 876 CP40762 PH-68 PH-68	ora	SM	OUH62					4576SLS		CH6201822	6541												
In Out-64 PH-68 2577WS-1 WBH6402022 876 CP20760 PH-68	aïque/Mosaic	D	OUH63					4574DB		CH6301822	6542												
	ta	RI	OUH64					4577WG5-1		WBH6402022	8766	CP20799										PH64B	
	yon	RI	OUH65	_	_		PH65B	2610WG5-1	_	WBH6502022	8767	CP40962			_							PH65B	_
		RI AU	OUH66 OUH67	_			РНООВ	2609WG5-1 4570WG2	-	WAURAH67	8768AA 8769-1518-1	CP60252			-	_			_	_		PH66B PH67R	-
				MRI M70**	DM70V	DGM70V			+			CD41029			+		W(824/02					PH6/R PSH70V	_

HPL – High Pressure laminate



- **Cover Tooling**
- **Horizontal Surfaces**
 - Desks
 - Countertops

Edgebanding, Doors and Mouldings

Innovative designs
 and any creation
 completed with
 crowns; valance,
 moulding for 5 piece
 doors, or any
 traditional
 woodworking
 component.



ENVIRONMENTAL CERTIFICATIONS



CARB

<u>California Air Resources Board</u> is a part of the California Environmental Protection Agency

Mission: To promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants while recognizing and considering the effects on the economy of the state.

CARB

Table 1

Phase 1 and Phase 2 Formaldehyde Emission Standards for Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)¹

_												
	Phase 1 (P1) and Phase 2 (P2) Emission Standards (ppm)											
Effective Date	HWPW-VC	HWPW-CC	РВ	MDF	Thin MDF							
1-1-2009	P1: 0.08		P1: 0.18	P1: 0.21	P1: 0.21							
7-1-2009		P1: 0.08										
1-1-2010	P2: 0.05											
1-1-2011	P2: 0.05		P2: 0.09	P2: 0.11								
1-1-2012					P2: 0.13							
7-1-2012		P2: 0.05										

⁽¹⁾ Based on the <u>large chamber primary</u> test method ([ASTM E 1333-96)(2002)] in parts per million (ppm). HWPW-VC = veneer core; HWPW-CC = composite core.

CARB

CSACANADIAN STANDARDS ASSOCIATION







ECCTM

ECCTM (Eco-certified Composite) New since April 2012

The **ECC** TM certification (Eco-Certified Composite) is a voluntary standard developed by the **Composite Panel Association (CPA).**

To be ECC certified, the mill must first meet the strict emission requirement of CARB Phase 2 for composite wood products. They must then comply with at least three of the five CPA requirements.

The five criteria are: Carbon Footprint

Local Resources

Recycled Content

Sustainability and Responsible Wood Sourcing.

FSC® - Forest Stewardship Council

The Forest Stewardship Council® (FSC®) is a non-governmental, non-profit organization. It was created in 1993 by a representative group of organizations from 25 countries.

It's mission is to promote the responsible management of forests. Their main concept is the chain of custody that follows the product from forest to consumer.

- FSC fiber + FSC Manufacturer + FSC Distributor + FSC Kitchen or Office
 Furniture Manufacturer = FSC Product
- Every supplier needs to get his own FSC number.

FSC® - Forest Stewardship Council

FSC® 100%

100% pure FSC® fibres

FSC® Mix Sources

- FSC® 100% + FSC Controlled Wood Fibres (CW)
- Mix Credit System
 - 1 credit = 1 ton
 - \bullet 0.605 tons = 1M³

Ex. 1 Truck = $50M^3 \rightarrow 30.25$ tons

= 30 credits

SFI SUSTAINABLE FORESTRY INITIATIVE

LEED® - Leadership in Energy and Environmental Design

OBJECTIVES and APPLICATIONS

- LEED aims at sustainable building evaluation for new constructions, important renovations, interior space planning for commercial locations...
- LEED is a privileged way of reducing environmental impact during construction or renovation.
- LEED applies to commercial, industrial, institutional and to multi-unit residential buildings.

LEED® - Leadership in Energy and Environmental Design



LEED® 2009 - Leadership in Energy and Environmental Design

To obtain LEED certification, a building must meet six major evaluation criteria:

- 1 Environmental management of sites
- 2 Effective water management
- 3 Energy and atmosphere
- 4 <u>Materials and resources (up to 5 points)</u> ←
- 5 <u>Interior environment quality (up to 1 point)</u> ←—
- 6 Design innovation and processes

Panel Products can contribute in 2 categories

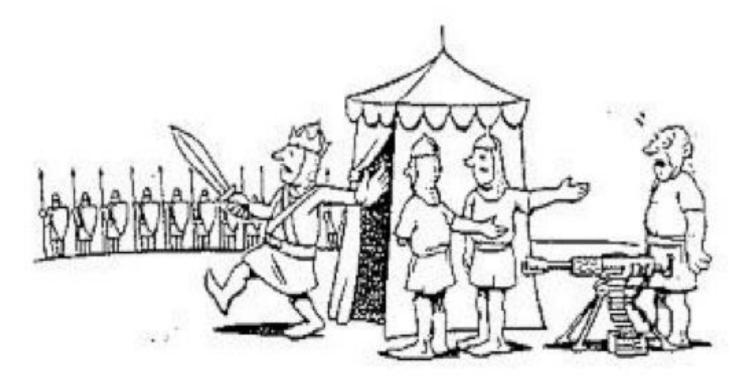
LEED® v4 - Leadership in Energy and Environmental Design

To obtain LEED certification, a building must meet six major evaluation criteria:

- 1 Environmental management of sites
- 2 Effective water management
- 3 Energy and atmosphere
- 4 <u>Materials and resources (up to 3 points)</u> ←
- 5 <u>Interior environment quality (up to 1 point)</u> ←—
- 6 Design innovation and processes

Panel Products can contribute in 2 categories

SUPPLY MANAGEMENT



"I don't have time to see any crazy salesman; I have a battle to fight."

THANK YOU

mike.rolston@uniboard.com

Further questions or information

Please visit the Uniboard Booth

#1047

