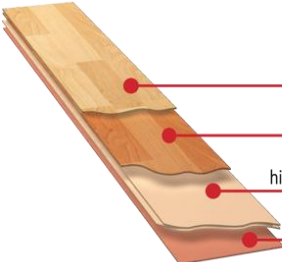


HELVETIC LAKE VIEW COLLECTION

HELVETIC LAKE VIEW PREMIUM FOR GENERAL COMMERCIAL USE (AC4/32)

Menznau, 01. Jan. 2015 | Version 1.2 (supersedes all previously published data)

Characteristics	Attractive: Available in eight authentic, limed Oaks in modern colour tones from light to dark and ten individual, distinguished planks.. A floor of timeless beauty to enrich any place. Innovative: Looks and feels like a precious hardwood floor. Produced with the latest technology. Healthy: Produced according to European standards. For a healthy living, emissions of vapours are the same as you would expect from wood in its natural state. Ecological: Wood from local sources – produced at the most modern, environmental friendly production facility of its kind. Resilient: High abrasion (cl. AC4/32), for general use in commercial applications. Affordable: Unbeatable price/performance ratio compared to traditional hard wood floors: You not only save initially when buying the floor but again later on in both money and time. It is a low maintenance and easy to care flooring. There is no need to wax, polish nor sanding it, and it stays looking like the day you laid it for years and years.																		
Technical classification	Laminate floor covering according to EN 13329 High Density Fibreboard (HDF) Declaration of Performance (EN 14041): www.kronospan.ch/dop  KCH_LF_003																		
Use	Floor-Covering inside buildings <table><thead><tr><th></th><th colspan="3">Levels of use</th></tr><tr><th></th><th>Moderate</th><th>General</th><th>Heavy</th></tr></thead><tbody><tr><td>Domestic</td><td>  AC 1 / Cl. 21 Bed-, guestrooms </td><td>  AC 2 / Cl. 22 Living-, dining rooms </td><td>  AC 3 / Cl. 23 Kitchen, entrance halls </td></tr><tr><td>Commercial</td><td>  AC 3 / Cl. 31 Hotel rooms, small offices </td><td>  AC 4 / Cl. 32 Offices, boutiques </td><td></td></tr></tbody></table>				Levels of use				Moderate	General	Heavy	Domestic	 AC 1 / Cl. 21 Bed-, guestrooms	 AC 2 / Cl. 22 Living-, dining rooms	 AC 3 / Cl. 23 Kitchen, entrance halls	Commercial	 AC 3 / Cl. 31 Hotel rooms, small offices	 AC 4 / Cl. 32 Offices, boutiques	
	Levels of use																		
	Moderate	General	Heavy																
Domestic	 AC 1 / Cl. 21 Bed-, guestrooms	 AC 2 / Cl. 22 Living-, dining rooms	 AC 3 / Cl. 23 Kitchen, entrance halls																
Commercial	 AC 3 / Cl. 31 Hotel rooms, small offices	 AC 4 / Cl. 32 Offices, boutiques																	
Product structure	 high resistance overlay decorative paper high density fiberboard HDF high value back paper	 DS Slip resistant surface structure  Cfl-s1 Flame retardant, no smoking emissions	 Floor heating approved  V4 4 sided V-groove																
Certification	 Swiss Made Swiss Quality  Quality and Environment Management  Member of European Pro- ducers of Laminate Flooring  CO2-reduced fabrication  Ask for FSC- certified flooring  Flooring from Swiss Wood																		
Warranty and maintenance	Residential warranty: 25 years Commercial warranty: 3 years Warranty conditions : http://www.kronospan.ch/en/products/flooring/your-guarantee.html Care and maintenance: www.eplf.com/en/laminate/infomaterial.html																		



Product range and technical specifications

Product specifications

Size per board:	1845 x 244 x 10 mm
1 Box contains:	4 boards in total 1.801 m ²
Characteristics:	4-sided V-Groove, 5G-drop lock installation

Technical specifications

Characteristic	Value	Explanation	Rating	Standard
----------------	-------	-------------	--------	----------

Classification Properties

Level of use	Class 32	General use in commercial applications	High resistant Class	EN 13329
Abrasion resistance	AC 4	≥ 4000 revolutions (IP ≥ 4000)	High, Cl. 4 of 5	EN 13329-E
Impact resistance	IC 2	Small ball (surface resistance), impact in N Large ball (panel resistance), height of fall in mm	Medium, Cl. 2 of 3	EN 13329-F
Reaction to fire	Cfl-s1	Flame-retardant, no smoke emission	Improved skill for floor	EN 13501-1

General Properties

Thickness swelling	≤ 18 %	24 hours in water bath of 20°C	Normal swelling	EN 13329-G
Volatile Organic Compounds in total after 28 days	< 100 µg/m ³	TVOC _{28d} required for inside use < 1000 µg/m ³	Very low emissions	ISO 16000
Formaldehyde emission	≤ 0.1 ppm ≤ 0.11 ppm	E1 ≤ 0.1 ppm CARB II ≤ 0.11 ppm	Very low emission	EN 717-1 ASTM E 1333
Surface soundness	≥ 1.00 N/mm ²	Quality of bonding between coating and panel.	According to standard	EN 13329-D

Physical Properties

Static indentation	No visible change	≤ 0.01 mm indentation using a straight steel cylinder of 11.3 mm diameter	According to standard	EN 13329 EN 433
Thermal resistance	0.075 (m ² K)/W	Use of floor heating only if thermal resistance is lower than 0.15 (m ² K)/W	Qualified for use with floor heating	EN 12667
Slip resistance	DS	Slip resistant (DS) if coefficient ≥ 0.3	fulfilled	EN 14041
Effect of a furniture leg	No damage	Tested with foot type 0	high resistance	EN 13329 EN 424
Effect of a castor chair	No damage	25'000 cycles without any damage	high resistance	EN 13329 EN 425

Optical Properties

Resistance to staining	Level 5 in group 1+2 Level 4 in gr. 3	No visible change (group 1 Aceton and 2 Cof-fee), light change in group 3 (strong acids)	Very high optical resistance, grade 5/4 of 5	EN 13329 EN 428-2.26
Light fastness	≥ 6	Blue wool scale: change of colour with method of grey scale	Very stable (level 6 of 6)	ISO 105-B02
Resistance to cigarette burns	4	Light visible change	Good resistance (4 of 5)	EN 438
Micro scratch resistance	≤ 20 %	Gloss change (Martindale Test)	Very low change	EN 16094

Size and Tolerances

Characteristic	Value	Tolerance (acc. to Standard, requirements fulfilled)	Standard
Thickness of the element, <i>t</i>	10 mm	$\Delta t_{\text{average}} \leq 0.50 \text{ mm} \mid t_{\text{max}} - t_{\text{min}} \leq 0.50 \text{ mm}$	EN 13329
Length of the surface layer, <i>l</i>	1'380 mm	$\Delta l \leq 0.50 \text{ mm}$	EN 13329
Width of the surface layer, <i>w</i>	193 mm	$\Delta w_{\text{average}} \leq 0.10 \text{ mm} \mid w_{\text{max}} - w_{\text{min}} \leq 0.20 \text{ mm}$	EN 13329
Squareness of the element, <i>q</i>		$q_{\text{max}} \leq 0.20 \text{ mm}$	EN 13329
Straightness of surface layer, <i>s</i>		$s_{\text{max}} \leq 0.30 \text{ mm/m}$	EN 13329
Flatness of the element, <i>f</i>		Width: $f_{w, \text{concave}} \leq 0.15 \% \mid f_{w, \text{convex}} \leq 0.20 \%$ Length: $f_{l, \text{concave}} \leq 0.50 \% \mid f_{l, \text{convex}} \leq 1.00 \%$	EN 13329
Maximum single values			
Openings between elements, <i>o</i>		$o_{\text{average}} \leq 0.15 \text{ mm} \mid o_{\text{max}} \leq 0.20 \text{ mm}$	EN 13329
Height diff. between element, <i>h</i>		$h_{\text{average}} \leq 0.10 \text{ mm} \mid h_{\text{max}} \leq 0.15 \text{ mm}$	EN 13329
Dimensional variations after changes in relative humidity, δ		Width: $\delta_{w, \text{average}} \leq 0.9 \text{ mm}$ Length: $\delta_{l, \text{average}} \leq 0.9 \text{ mm}$	EN 13329

Ecological Properties

Energy and Content	Renewable energy > 90 % wood fibre ~80 %, Swiss wood UF adhesive ~15 %	SIA 493.05
Swiss Product declaration	no post-consumer recycled content no chlorides and no biocides in the wood heavy metal free coating	
Disposal	Thermal recycling	Swiss Leg.