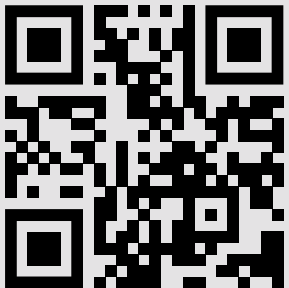


HPL Adhesive Table



				Dispersion adhesives		Condensation adhesives			Contact adhesives		Hot melt			Reactive adhesives
				1C-PVAC	2C-PVAC	UF resin/UF resin with approx. 10 % filler	MUF / MUPF resin	phenol-resorcinol resin	without hardener	with hardener	EVA ethylene vinyl acetate	PA polyamide, PO polyolefin, polyamide-polyolefin	PUR polyurethane	polyurethane, polyester, epoxy adhesive
				D2/D3/D4	D3/D4	D2/D3	D3	D3/D4	no classification acc. EN 204/205		classification not applicable		D/D4	D3/D4
classification acc. EN 204/205				D2/D3/D4	D3/D4	D2/D3	D3	D3/D4	no classification acc. EN 204/205		classification not applicable		D/D4	D3/D4
Temperature resistance [°C]				-20 to +100	-20 to +100	-20 to +150			-20 to +70	-20 to +100	-20 to +80	-20 to +100	-20 to +140	-20 to +100
Wood materials	Chipboard		1	adhesive application: 80 – 200 g/m² on HPL or substrate wet life: 2 – 30 min.	adhesive application: 90 – 150 g/m² on HPL or substrate wet life: 5 – 15 min.	adhesive application: 100 – 180 g/m² on HPL or substrate wet life: 2 – 15 min.	adhesive application: 150 – 200 g/m² on HPL or substrate wet life: depends on adhesive type and applied quantity specific pressure and press time: gravity of pressure sufficient, strength depends on the pressure press temperature:mind. +20 °C	adhesive application: 80 – 150 g/m² on HPL or substrate specific pressure: roller pressure adhesive application temperature: 160 – 220 °C	adhesive application: 60 – 100 g/m² on HPL or substrate specific pressure: roller pressure adhesive application temperature: 120 – 160 °C	adhesive application: 150 – 200 g/m² on HPL or substrate wet life: depends on adhesive system specific pressure: stack pressure, store flat and smooth pressing temperature and pressing time depend on the adhesive and catalyst system used (pre-treatment is absolutely necessary for metals)				
	Plywood and blockboard		2											
	Fibreboard MDF, HDF		3											
	Solid wood		4											
Honeycomb sheets	Paper honeycomb	note the thickness differences between frame and core, e.g. adapt contact pressure	5	specific pressure: approx. 2 – 5 bar press temperature/time: 20 °C/2 – 60 min. 40 °C/2 – 12 min. 60 °C/2 – 6 min. 80 °C/1 – 3 min.	specific pressure: approx. 3 – 5 bar press temperature/time: 40 °C/30 – 45 min. 60 °C/10 – 12 min. 80 °C/ca. 5 min. 100 °C/ca. 1 min.	specific pressure: 3 – 5 bar press temperature/time: 20 °C/2 – 60 min wet life and press temperature/time depend on the catalyst system used								
	Aluminium honeycomb		6											
Foam boards	PS foam	use lower contact pressures	7	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE					
	Phenol foam		8											
	PU foam		9											
	PVC foam		10											
Mineral substrates	Vermiculite		11	adhesive application: 110 – 150 g/m² on HPL or substrate wet life: max. 10 min. specific pressure: approx. 2 – 5 bar temperature/time: 20 °C/30 min surface treatment recommended	surface treatment recommended see lines 1 – 5		recommended preferably for fire protection							
	Calcium silicate board		12											
	Cement fibre board		13	NOT APPLICABLE	see lines 11 – 13	applicable								
	Cement bonded chipboard		14											
	Gypsum plaster board		15								see lines 1 – 5	see lines 1 – 5		
	Gypsum fibre board		16								see lines 11 – 12	see lines 11 – 13		
Metal			17	NOT APPLICABLE			surface treatment absolutely necessary		see lines 1 – 5	NOT APPLICABLE		surface treatment absolutely necessary		
HPL			18				NOT APPLICABLE					applicable		
PROCESSES														
Flat lamination with HPL	Block press (cold), low surface pressure		19	adhesive applied with roller, spray nozzle or scraper	hardener pre-application process; adhesive application with roller		hardener addition process; adhesive application with roller or scraper	adhesive application by spraying or spreading	adhesive application with roller		adhesive application with scraper			
	single or multi-opening presses (cold, warm, hot)		20		hardener pre-application or addition process; adhesive application with roller or scraper									
	short cycle presses (warm, hot)		21											
	continuous presses (warm, hot)		22									see line 20		
Moulding with HPL	Forming presses		23	only suitable for large radii in two dimensions						NOT APPLICABLE		only suitable for large radii in two dimensions		
	Vacuum membrane presses		24											
Postforming	Stationary	refer to Technical Bulletin “Processing postforming HPL”	25	applicable	applicable			NOT APPLICABLE						
	Continuous		26		D4 requires special process parameters									
Edge banding	Stationary		27	cold pressing or using a heating bar				applicable		with pre-coated edge bandings		NOT APPLICABLE	applicable	
	Continuous		28	cold adhesive activation process		NOT APPLICABLE				hot melt adhesive application to the substrate or edge bandings				



More information on HPL bonding under: <https://www.icdli.com>

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