Mother of pearl and shell *inlay* specification

The ground matters more than the shell. The formats, the build-up, the moisture rule from the USDA Wood Handbook, the care steps and the questions to ask about species and permits, with wording for the specification. No standard exists for shell inlay, so working sizes are left to the partner.

AT A GLANCE

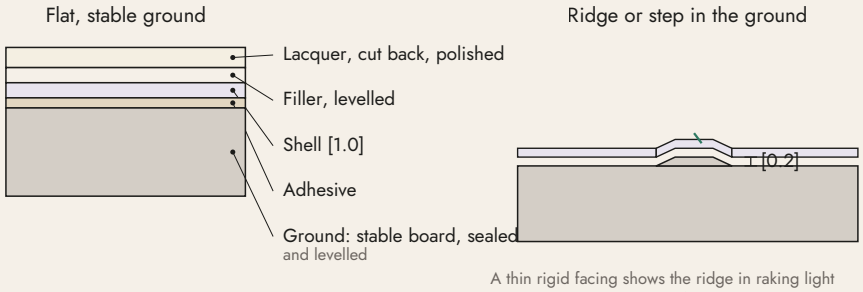
Format	What it is (our pages)	Typical use	Specify
Inlay	Shaped pieces cut and set into a recess, then levelled flush	Motifs, borders, lettering in timber or lacquer	Recess depth to the piece; a stable ground
Tessellated tiles	Small squares or geometric pieces laid edge to edge, joints kept tight	Table tops, cabinet faces, wall panels	Tile size, joint width and colour, flat ground
Marquetry	Shell cut with veneers to one pattern and assembled as a sheet	Iridescence against matt timber	Cut method, the pairing with timber, flush finish
Laminate sheet	Shell thinned to uniform thickness on a backing	Flat panels	Sheet size, colour variation across sheets
Flexible veneer	Thin shell laminated to a flexible backing	Gentle curves	Minimum radius, adhesive, backing
Reconstituted shell	Natural nacre bonded into a uniform sheet	Calm, repeatable fields, larger areas	Binder, tone range, thickness

Descriptions are what our own shell and mother of pearl pages say. No standard or trade guide for shell inlay was found.



Plan views, schematic. The ground beneath must be flat and stable in all three. Original drawing by Make Bespoke Studio.

Three ways shell is laid, in plan: an inlay in a recess, tessellated tiles with fine joints, and marquetry assembled with timber. Schematic; flat tints, not product colours. Original drawing by Make Bespoke Studio.



Schematic, not to scale; sizes in brackets are examples. Original drawing by Make Bespoke Studio.

Left: the build-up of a shell surface on a flat, stable ground. Right: the same stack over a ridge, which a thin rigid facing shows or cracks over. Schematic, not to scale; brackets are examples. Original drawing by Make Bespoke Studio.

CARE, FROM OUR PAGES

- Dust with a soft dry cloth, or wipe with a barely damp one and dry at once.
- No abrasive pads, solvents or ammonia-based glass cleaners.

- Keep out of prolonged direct sun and away from standing water.
- Mat under hot or wet objects. A decorative top, not a worktop.

SPECIFICATION WORDING

SHELL INLAY OR TESSELLATION

[Natural / reconstituted] [mother of pearl / abalone / capiz / penshell] [inlay / tessellated tiles], pieces [1.0] mm thick, tiles [ ] × [ ] mm with [ ] mm joints in [colour], bonded with [adhesive stated by the workshop] to a ground of [stable MDF / plywood], [ ] mm thick, sealed and levelled. Ground flat to [ ] mm over [ ] mm before bonding, checked with a straight edge and raking light. Recess, where used, [1.6] mm deep. Pieces sorted and oriented as approved sample [ref].

MOISTURE AND MOVEMENT

Ground conditioned to [ ] per cent moisture content before bonding, to match the expected room condition of [ ] per cent relative humidity; no solid timber ground under fields wider than [ ] mm unless the workshop states how movement is controlled. Largest unbroken field [ ] × [ ] mm; movement joints at [positions on drawing ref].

FINISH

Surface filled, levelled and built up with [clear lacquer], cut back and polished to [satin / high polish], sheen [ ] gloss units at [60] degrees measured to [method stated]. No lifting, cracking, voids or step greater than [0.1] mm at any seam under raking light at [500] mm. Approved sample [ref] and mock-up [ref] govern.

SOURCING AND DOCUMENTS

Before purchase the partner is to state, for each shell, the species and origin, whether it is CITES-listed and, if so, the permit and how it will accompany the finished piece; for reconstituted sheet, the binder and any formaldehyde or VOC statement; for dyed shell, any light-fastness report. Written care instructions are to be supplied for the handover manual.

TERMS USED

Nacre
The iridescent inner layer of some mollusc shells, also called mother of pearl. Our pages say it is aragonite, a form of calcium carbonate.

Tessellated shell
Small flat pieces of shell laid edge to edge across a ground with tight joints, like a fine mosaic.

Reconstituted shell
Natural nacre bonded into a uniform sheet, giving more consistent tone and thickness than natural shell, at the cost of some natural variation (our pages).

Telegraphing
A thin, rigid facing showing any unevenness or movement in the ground beneath it.

CITES
The Convention on International Trade in Endangered Species of Wild Fauna and Flora, which controls trade in listed species through permits.

STANDARDS AND SOURCES

- USDA Forest Products Laboratory, Wood Handbook: Wood as an Engineering Material, FPL-GTR-282 (2021): Table 4-2; Chapter 10 pp. 10-13 to 10-14. US species. Read 8 Nov 2026.
- Canadian Conservation Institute, Agent of Deterioration: Light, Ultraviolet and Infrared: page dated 2018-05-17; dye sensitivity.
- CITES: listing of queen conch seen only in a search summary; the appendices were not read. Check the current species database.
- Our shell and mother of pearl pages: kinds, formats, substrate, finish and care. No standard for shell inlay was found.

Full guide: https://makebespoke.com/trade/technical/mother-of-pearl-and-shell-inlay-specification. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.