Galvanized Sheet for Roofing
A few notes

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Jean Lamesch
Corrugated Galvanized Roofing Sheet =

Steel sheet + a hot dip zinc coating on each side

Use this

not this:
Steel Quality: Normal, Plain Vanilla, not « Structural » steel

Note: Structural grade corrugated steels would only be used for pouring concrete steel decks or slabs
STEEL THICKNESS:
For sufficient stability and ease of handling, a steel thickness of around 0.4mm is the right choice for low rise lodgings. But don't take thinner gauges. In many English speaking countries, also in the Pacific Area, thicknesses are in English units, hence not in mm, but in fraction of inches, or in other measures. Corresponding mm-inch tables abound on the net. Remember, for simple roofing, 0.4 mm should be the norm.
HOT DIP ZINC COAT THICKNESS:
Must be 20 micrometers.
Such a thickness is easy to measure instantly on a handheld electronic gaugemeter or thicknessmeter. It is worthwhile having such an instrument when the size of the building yard warrants it.

Verify by hand: Zn-density = 7.1 g/cm³
then a sheet of 1 m², with a thickness of 20 micrometers has a coating weight of 275 g/m²
This is a summary of all the data you need
ATTENTION
For roofing purposes, one needs HOT DIP GALVANIZED SHEET 20 micrometer and not ELECTROGALVANIZED SHEET 2 micrometers hence the precaution of a thicknessmeter
ZINC thickness and Climate
3 climate types: maritime, urban-rural, industrial
maritime climate = corroding salt,
especially the first 800 m from the shore
industrial climate = acid SO2
If a permanent building must be built near the
shore, like a storehouse in a harbour, it is best to
increase coating weight above 275 g.
MOST IMPORTANT: Nails, screws and disks must
be corrosion protected as well, if not better, than
the corrugated sheet itself. This is often
overlooked.
CORROSION AND TEMPERATURE
The hotter the climate, the more aggressive is corrosion.

Example: on the shore of a southern Philippine island, galvanized roofs rust more rapidly than in the rural area of a northern Philippine island.
FIXING THE SHEET a crucial aspect to avoid FLYING RAZOR BLADES in a storm.

Points to avoid unbuttoning:
- the optimal LENGTH of nails or screws as a function of underlying wood quality
- the right DIAMETER of the nail’s HEAD, to avoid unbuttoning in case of storms
- the right DIAMETER of steel disks
PURCHASE
Buy the corrugated galv steel only in a Steel Survive Center SSC, with a good reputation. But take delivery only armed with a mechanical steel gauge for thickness and with an electronic coating gauge for the zinc thickness. Both gages are cheap compared to the cost of a bad purchase.
WHITE RUST
Dont store galvanized corrugated sheet for weeks and weeks in a pile. There are negative condensation effects between the sheets in contact, which develop white crusts between the individual sheets. This does not happen out of the pile. Check this also when buying in the SSC.
If you have further questions you can contact me, and, if you are in the Pacific Area, don't hesitate to contact the large Australian steel producer BHP. They have traditionally a lot of R&D going on. Anyway, in a Philippine SSC, the steel is either Australian, or Japanese.
A R&D Suggestion for uncertain wood qualities. Construct a steel frame of e.g. 2x1 meter, with the wood to be studied as the upper border. The frame’s height should be that of an inflatable dinghy. Fit the deflated boat inside the frame. Nail or screw a galv sheet on the wood. Inflate the dinghy until the fixings fail and measure that pressure on the air pump. Compare this pressure with other wood types and if necessary change the type of fixings.
A Suggestion for R&D: