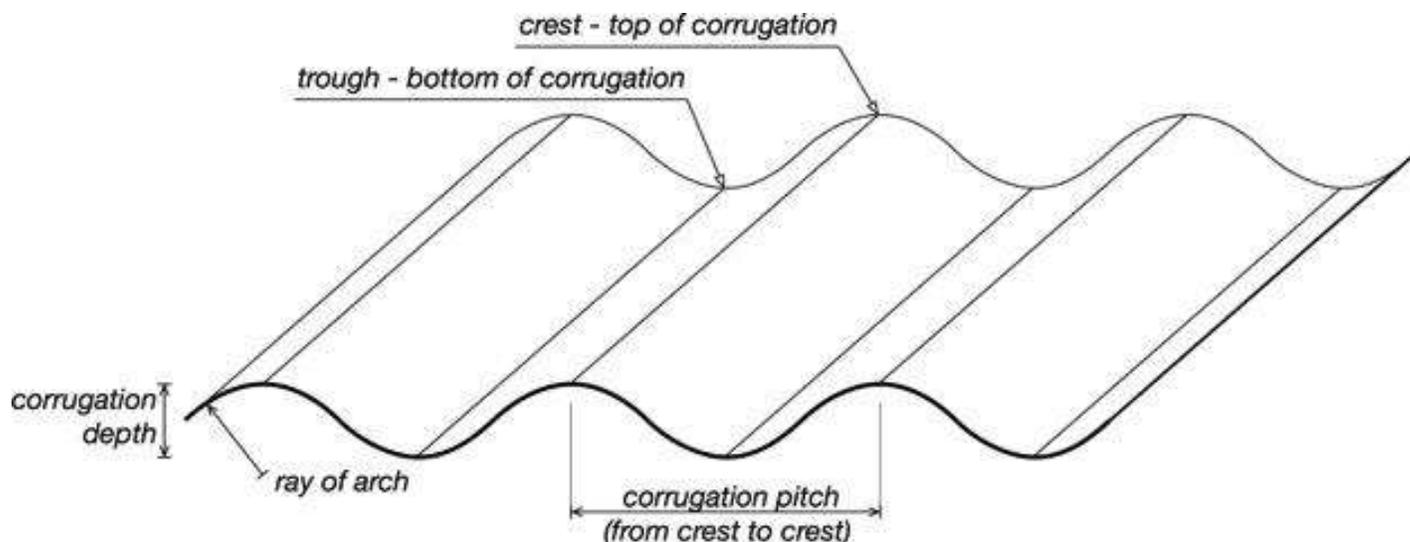


Corrugated Galvanised Iron (CGI) for Roofing

CGI terminology:



Specifications for CGI	Recommended for Roofing (According to Nepal Standard ¹)
Minimum Thickness	0.35 mm
Zinc Coating	Hot dip galvanization with minimum 120 g/m ² zinc on each side of sheet.
Approximately Weight per bundle	55 kg
Nominal Depth of Corrugation	18 mm (Tolerance +/- 1.5 mm)
Nominal Pitch of Corrugation	76.2 mm (Tolerance +/- 2 mm)
No of Corrugation	½ + 10 + ½
Width of Sheet	875 mm (Tolerance +/- 10 mm)
Length per bundle (ft.)	Approximately 72 feet. Depending on the length of sheet CGI bundles are sold as follows: 12 sheets of 6 ft.; 10 sheets of 7 ft.; 9 sheets of 8 ft. long; 8 sheets of 9 ft. (recommended by GoN); 7 sheets 10 ft.; 6 sheets 12 ft
Estimated Price per Bundle	6,000 - 6,700 Nepali Rupee (60 - 67 USD), depending on quality

The quality of CGI sheets is measured in terms of 'gauge' which is directly linked to thickness (mm) of the sheets. The table below outlines the thickness of sheet associated with each gauge:

			Suggested	Suggested		
SWG (British Std.)	24	26	28	30	32	34
Thickness (mm)	0.701	0.551	0.475	0.399	0.34	0.234

¹ Nepal Standard for Corrugated Galvanised Iron: <http://nbsm.gov.np/file/download/file1712045347.pdf>

In Nepal, the Japanese system for gauge is used, which is slightly different to the British system for gauge. There have been reports of sheets advertised as 26 gauge on the market, which are in fact closer to 30 gauge in terms of thickness (mm). Shelter Cluster partners are advised to ensure that the thickness of sheets is measured during the procurement process and CGI sheets between 0.475 and 0.399 mm thickness are recommended in order to ensure ease of transport (at these thicknesses, CGI sheets can be rolled for transportation).

Tips for Purchasing CGI Sheets and Galvanized Steel Items:

- Fixings/fasteners and sealing washers must be made of galvanized steel, with similar zinc coating thickness to avoid corrosion and breakage.
- Always verify the zinc coating thickness, by using a coating thickness gauge; a magnetometer. The supplier may want to sell electro-galvanized steel which looks like hot-dip galvanized but can have a zinc coating thickness that is up to 10 times thinner.
- If the price for items made of galvanized steel seems expensive, you should check if the items are not made of stainless steel (3 times more expensive than galvanized steel). Use a magnet to check, if the magnet does not stick to the item, then it is made of stainless steel.

Health and Safety: Ensure that handling staff are equipped with gloves and sturdy boots to prevent injury, and that a first aid package is available at loading and off-loading locations.

Packing: If they are being airlifted, bundles of sheets of CGI should be packaged in a sturdy wooden box. This is especially critical if the CGI is being delivered by helicopter or being stored on or near an airfield.

Storage: Bundles shall be so laid that the corrugations run in the same directions in every course. One end of the stack shall be raised by 100 mm to 150 mm to allow water to flow freely away from the sheets. If the sheets are not to be used immediately, they must be stored in a covered area.

Fixings Specifications:

Items	Specification	Unit	Qty	Approx. USD
Nylon rope	8mm dia; Polypropylene recycled fibres, UV stabilised; minimum 3 strands; colour black/blue; Packed in roll	kg	1.5	3.00
Tie wire	Low carbon steel, galvanized binding wire; 16 gauge; Commercial type medium coated, Packed in roll	kg	1.5	1.50
Nails for roof	Iron nails, made of polished low carbon steel, cold processed, not heat treated except for galvanization; Spiral rolled or twisted shank, sealed umbrella-type spring-head Size: 75x3.6mm, Attached rubber washer to each nail; head dia 22 mm thick; Packed in strong and thick plastic bag	kg	0.5	2.50
Nails for wood	Iron nails, polished low-carbon steel; cold processed, not heat treated except for galvanization; Large type-(75x3.6) mm, head dia 7.7mm and Large type-(40x2.2) mm, head dia 5.5mm; Packed in a strong and thick plastic bag	kg	0.5	1.50
Bamboo	Treated and at least two year matured bamboo; Size: length 7 m, Circumference: 7 inch to 9 inch	pc	15*	40

