

# Modular House with Flat Roof

## 1. General Description

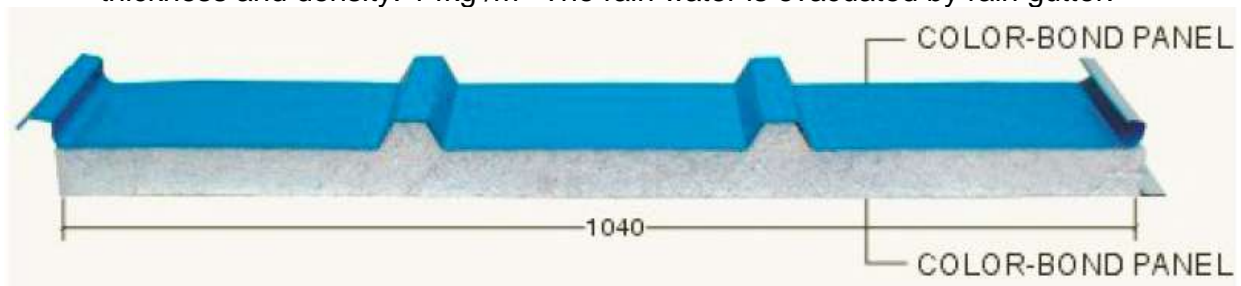
The prefabricated house with flat-roof is a roofing system with containerized frame. Lightweight steel structure is used as the basis and foundation of floor loading capacity. It fully takes advantages of the intensity of sandwich wall panel and roof panel, is constructed by bolting necessary steel components, such as beams, trusses, columns and others.

## 2. Specification:

- **Wall Panel:** Color-coated steel sandwich panel made of double-sided steel sheets and the middle layer of expanded polystyrene (EPS) foam or polyurethane(PU) foam, Steel Sheet: 0.326mm thickness, EPS or PU foam: 50mm thickness, density:  $14\text{kg}/\text{m}^3$ .



- **Roof Panel:** Color-coated steel sandwich panel made of corrugated double-sided steel sheets and the middle layer of expanded polystyrene (EPS) foam or polyurethane(PU) foam, steel sheet: 0.426mm thickness ( exterior ) ;0.326mmthickness (Interior); EPS or PU foam: 75mm thickness and density:  $14\text{kg}/\text{m}^3$  The rain water is evacuated by rain gutter.



- **Door:** Aluminum alloy doorframe and color-coated steel sandwich composite board as wall panel.
- **Window:** Aluminum alloy framed window with sliding glass.

### 3. Technical Parameter

- Live and Dead load capacity of Roofing:  $0.5-0.7\text{KN/m}^2$  ( $50\text{Kg}-70\text{Kg/m}^2$ )
- External wall heat transmission coefficient:  $0.35\text{Kcal/m}^2\text{hc}$
- Main skeleton (Base-plate or Floor plate Load Capacity):  $1.5-2.0\text{KN/m}^2$  ( $150\text{Kg}-200\text{Kg/m}^2$ )
- Wind resistance: Grade 11 (wind speed  $\leq 111.5\text{km/h}$ )
- Earthquake resistance: Grade 7
- Floor Plan

### 4. Loadability (Packing): Around 300 sq.m per 40 Feet High Cube Dry

### 5. Features and Advantage:

- Tightly airproof, heat insulated and preservation, waterproof, resistant to fire and moisture proof;
- Easy assembly and disassembly, flexible layout, green and environmental friendly;
- Beautiful in design and structure; color-coated steel sheet used in and out of the house; good appearance and effectiveness; the trade-off between design and color.
- Over 10 year's life span by normal use; space-saving for containershipping; repeatable and recycled;
- Material and labour extremely cost-efficient.

### 6. Application:

- Refugee camps, construction and mining companies (construction sites in town and remote locations)
- Emergency and disaster sites (hurricanes/floods/earthquake)
- Humanitarian disasters (housing camps)
- Areas with desperate needs for instant and cost-effective shelters
- Medical units
- Office / Administration space

## Pictures of Pre-Fabricated Housing/Foundation/Packaging



Social Housing (China)



Foundation Preparation

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Packaging of each unit