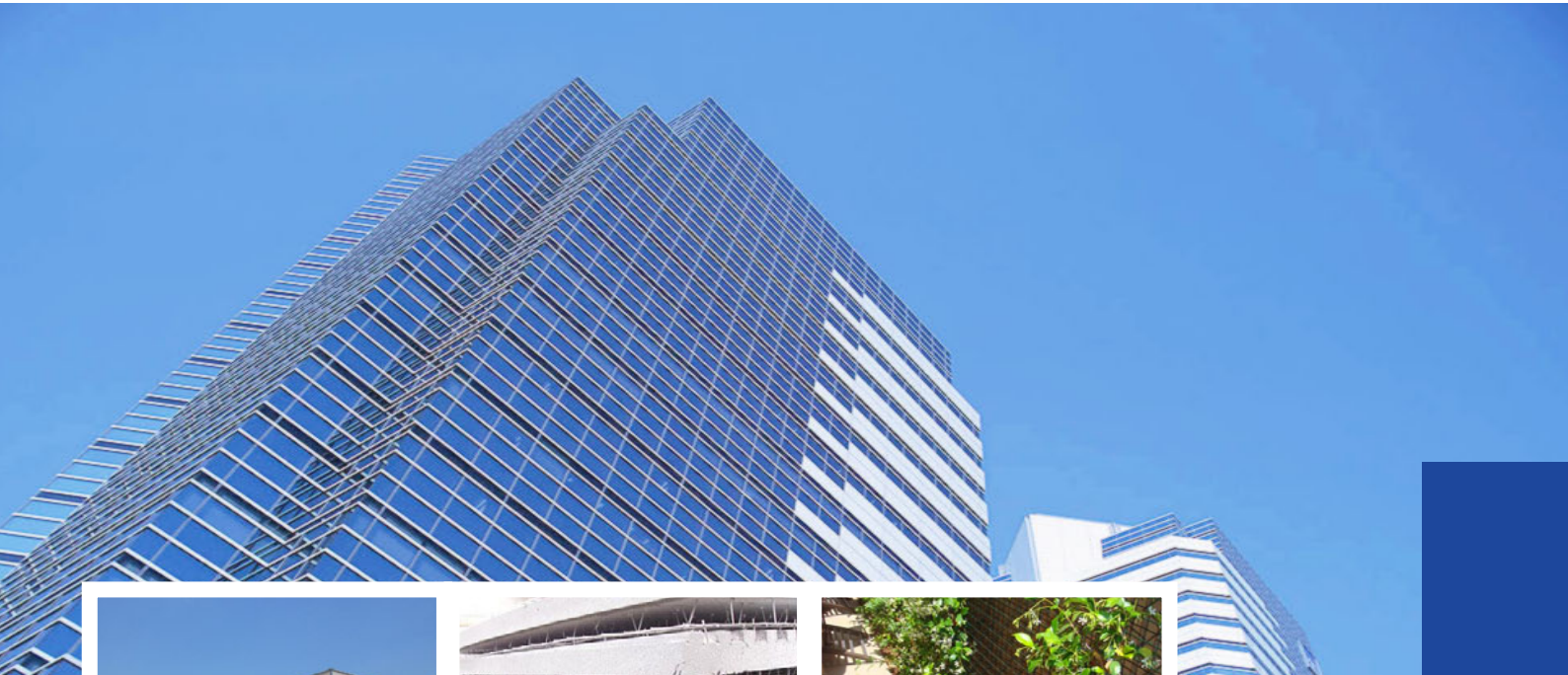


# **3D PANEL**

## **EASE IN INSTALLATION & CONSTRUCTION**





## ***About us***

Shijiazhuang City Ruiwanda Metal Products Co., Ltd., the manufacturer and supplier of expanded polystyrene 3D panel. The main directions are making reinforcing mesh 3D wire panel products and services.

3D panel - a modern building material for the rapid construction of new energy-efficient warm buildings and for renovation of existing buildings and structures. You can create a wide range of different objects: houses, walls, floors, roof, stairs, sports halls and farmhouses, etc.

Ruiwanda has more than 15 years experience of making the reinforcing mesh 3D panel product. We have enough experience, and mastered the entire cycle of the construction process from the production of wire panel materials to the development services. We have our own strict production line and panels are all made by the automatic equipment, which ensures high quality of welding and assembly of panels. With the latest and advanced production facility, we can give you products of the highest quality with competitive price.



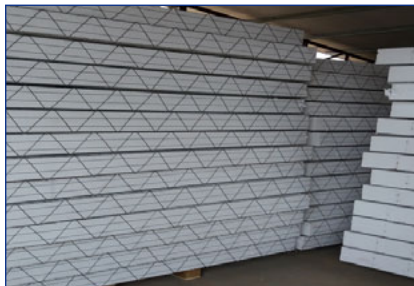
## 3D PANEL

3D panel is a spatial structure product consisting of an expanded polystyrene plate (usually called core), both sides of which are fixed welded wire fabrics made of high strength wire. The welded mesh fabric, connected piercing polystyrene with truss of steel wire, is welded to the welded fabric at an angle. It gives a rigidity spatial structure, and simultaneously prevents polystyrene core shifting.

According to the internal structure, 3D panel can be classified into 3D panel fence and 3D EPS panel.



- 3D panel fence, without expanded polystyrene sheet inside, is usually used as flower wall or fence.



- 3D EPS panel, with expanded polystyrene sheet inside, is usually used for houses, walls, floors, roof, stairs, sports halls and farmhouses, etc.

According to the foam board type, 3D panel can be classified into flat foam board type and wave shaped foam board type. The diagonal wire of flat foam board type can be direct cutting welding or bend welding. While it only can be direct cutting welding of wave shape foam board type.



3D panel - flat foam board

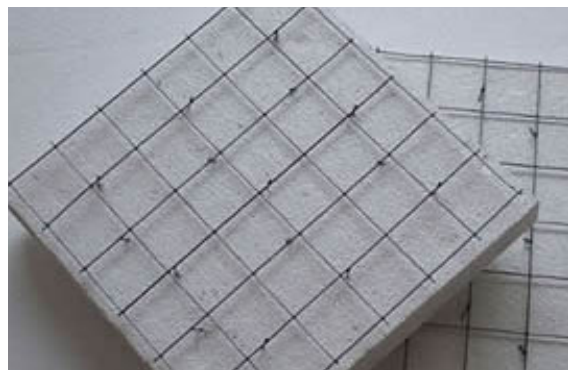


3D panel - wave shaped foam board

According to the diagonal wire welding method, 3D panel can be classified into bend welding type and direct cutting welding type



3D panel - bend welding



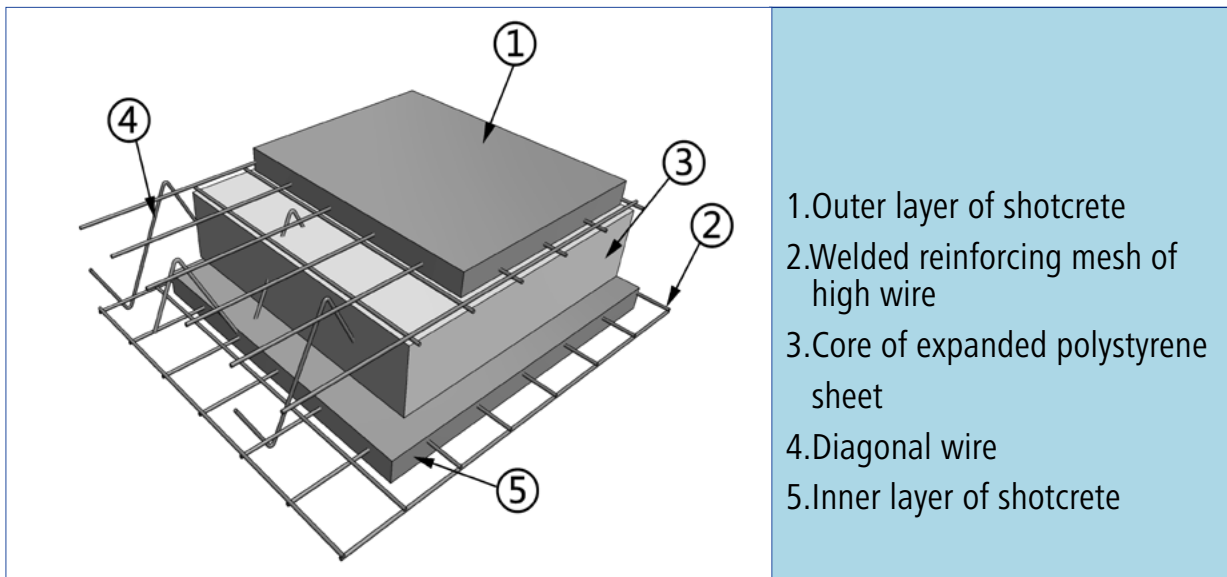
3D panel - direct cutting welding



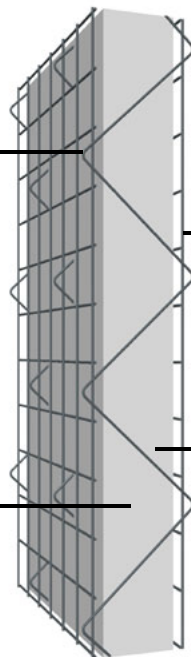
3D EPS panel house

**3D PANEL** includes welded reinforcing meshes made of high strength wire, diagonal wire and self-extinguishing expanded polystyrene uncoated concrete. And shotcrete is applied to the panel assembled at the construction site, which gives the bearing capacity of the structure.

3D wire panel after shotcrete has the following five components



Innovative steel truss system provides strength and rigidity. Each 1m<sup>2</sup> panel has 200 junctions and 400 welding points.



SAE 1006-At least 650 N/mm<sup>2</sup> tensile strength. 2.5 - 3.5 mm wire diameter, low carbon galvanized steel wire.

On each 10 cm, continuous diagonal wire .

16 kg/m<sup>3</sup> DIN B1 nonflammable, E.P.S. isolation material.



## SPECIFICATION DATA

We manufacture all sizes of 3D panels, the main specifications as following, and other size can be customized.

### 3D Panel dimensions

- Length: 2 m, 3 m, 6 m.
- Width: 1.00 m, 1.15 m, 1.20 m.
- Thickness: 50 mm (for walls), 100 mm (for the internal load-bearing walls), 120 mm (for exterior wall).

### Reinforcing welded mesh dimensions

- Material: galvanized wire.
- Reinforcing mesh wire diameter: 2.5 mm, 3.0 mm, 3.5 mm.
- Mesh size: 50 × 50 mm, 50 × 100 mm, 100 × 100 mm.

### Diagonal wire dimensions

- Welding type: direct cutting welding or bend welding.
- Galvanized wire diameter: 2.5 mm, 3.0 mm, 3.5 mm, 4.0 mm.
- Rows of diagonals' pitch: 100 mm, 200 mm.
- Peaks' pitch: 200 mm, 400 mm.
- Distance between the mesh and polystyrene: 16 mm (for walls), 0 mm (for load-bearing walls).

### Expanded polystyrene sheet (EPS) dimensions

- Sheet type: flat type or wave type.
- EPS thickness: 50 mm, 100 mm, 120 mm, 150 mm (for exterior walls 120 mm, internal 50 mm).
- EPS fire rating: B1: 20%, B2: 10% - 15%.
- EPS density: B1: 25 kg/m<sup>3</sup>, B2: 10 kg/m<sup>3</sup>, 5 kg/m<sup>3</sup>.



# 3D PANEL

- Easy installation
- Simplicity and time saving
- Thermal protection and insulation
- High strength and durability



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