

## 1. Material description of rockwool soundproof panels:

### A) Surface sheets description:

The surface sheets of rockwool composite panels could be PPGI steel sheets,PPGL steel sheets,aluminum alloy metal sheets.

<b>Surface sheets</b>	PPGI/ PPGL/ Aluminum sheets/ Al-Mg-Mn alloy metal sheets
<b>Steel thickness</b>	0.40 - 0.70 mm
<b>Aluminum sheets/ Al-Mg-Mn alloy metal sheets</b>	0.70 - 1.20 mm
<b>Coating type choice</b>	PE/ PVDF/ HDP/ SMP, etc.

### B) Core material description:

Rockwool is A level fireproof core material for sandwich panels,but this kind of material is afraid of water,so no matter it's production, delivery, or installation,we all need to take note for waterproof problem for rockwool material.But adding polyurethane sealing end can improve panel waterproof performance.Our regular thickness for rockwool is 50, 75, 80, 100, 150, 200mm,and density range is 80 - 150 KG/M<sup>3</sup>.

### C) Material warranty:

Our steel sheets cooperating partners are Bao-steel, Shougang steel, Guanzhou steel, Yieh Phui steel,etc.Rockwool raw material is our branch factory made it.

### D)What effects on panel lifetime?

- 1) Steel brand: Good steel brand could make sure good zinc and color coating,which avoid color fading;
- 2) Need to choose the suitable coating type for your project,accordign to your local climate features;
- 3) Need to do regular inspection and maintaince per 6 months.

#### **E) Product features:**

- 1) Good sound insulation and sound absorption;
- 2) Excellent thermal properties;
- 3) A1 level fire-resistant properties;
- 4) Excellent and suitable for outdoor use;
- 5) Easy installation.

#### **F) Material tolerances:**

**Length:**If length  $\leq 3$  meters,+/-5mm;

If length  $> 3$  meters,+/-10mm.

**Width:**+/-3mm

**Steel sheet thickness:**+/-0.02mm

**Panel thickness:**+2mm

## **2. Technical of rockwool soundproof panels:**

### **A)Loading tables:**

Panel thickness (mm)	External Steel (mm)	Internal Steel (mm)	Weight (kg/m <sup>2</sup> )	Span Type (mm)	Span Distance				
					1000	1500	2000	2500	3000
					Max. Distributed Load (kg/m <sup>2</sup> )				
50	0.50	0.50	14.30	Two Span	693	519	407	329	259
				Multi Span	705	530	410	329	262
60	0.50	0.50	15.30	Two Span	800	532	415	351	283
				Multi Span	811	543	421	351	285
75	0.50	0.50	16.80	Two Span	825	544	428	360	293
				Multi Span	833	554	434	363	295
100	0.50	0.50	19.30	Two Span	849	561	436	367	298
				Multi Span	856	569	442	371	299
150	0.50	0.50	24.30	Two Span	877	578	448	376	304
				Multi Span	881	583	453	380	305

**Notes:**

. Values have been calculated using the allowable "Stress Design" method, taking self weight, imposed loads (wind load) and temperature ( $\Delta t = \pm 20^{\circ}\text{C}$ ) into account.

. If loads are effected as downwards  $l/200$  and  $l/150$ , if loads are effected as suction  $l/150$  deflection limits have been used

. Values have been calculated using the steel quality  $f_y = 240$  Mpa (Yield Strength).

. In Panel weight calculations, Rockwool density is taken as  $100 \text{ kg/m}^3$ .

**B) Thermal transmittance coefficient (U value):**

Panel thickness	50 mm	60 mm	75 mm	100 mm	150 mm	200 mm
U (W/m <sup>2</sup> ·K)	0.80	0.58	0.66	0.43	0.29	0.20

**C) Thermal coefficient "R" value:**

Panel thickness	50 mm	60 mm	75 mm	100 mm	150 mm	200 mm
R (m <sup>2</sup> ·K/W)	1.25	1.35	1.52	2.33	3.45	5.00

**D) Sound insulation:**

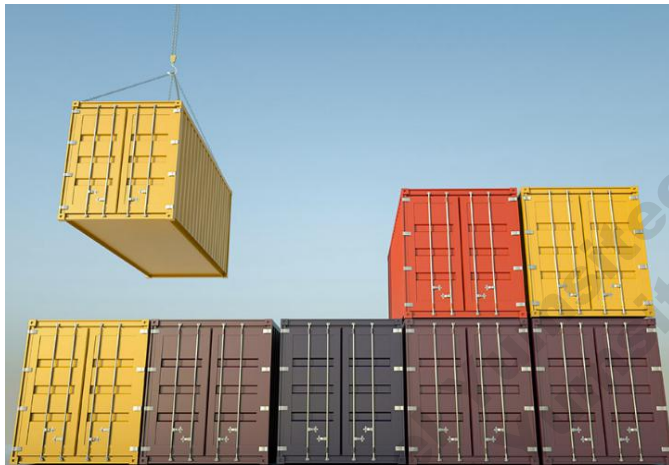
Panel thickness	50 mm	60 mm	75 mm	100 mm	150 mm	200 mm
R <sub>w</sub> (dB)	31	32	33	34	35	38

Remark: This calculation is based on  $100 \text{ KG/M}^3$  rock wool density.

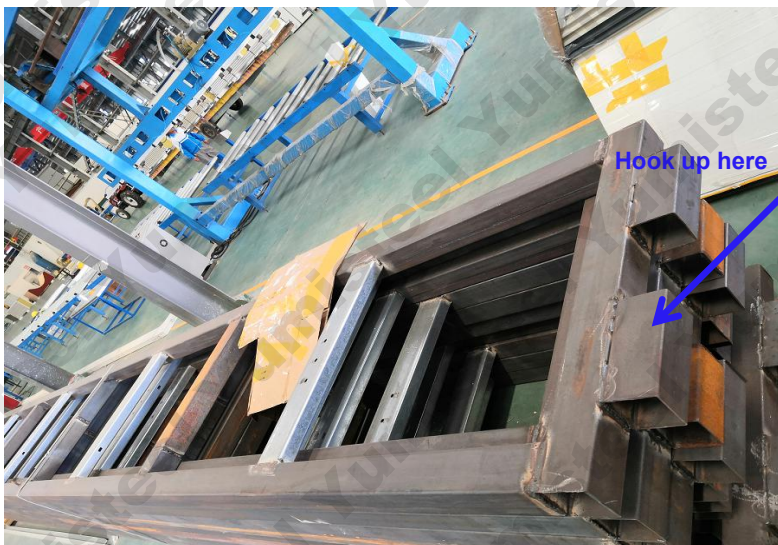
**3. Special unloading instruction:**

**A) Choose a flat floor to unload the containers;**

**B) Hang the containers to the floor with a crane;**



**C) Use the cleek or wire rope to hookup with the steel frame stand and hookup the other side to forklift, and the other 2 forklifts are arranged in a row, catching the sandwich panel facing the outside.**



The other forklifts stay like this direction, and catch the going out panels.



**D) When panels get out the container, then the 2 forklifts work together and send the panels to stack place. Please put wooden pallets or sleepers on the stack place to hold the panels. Please don't place the panels directly on the ground.**

