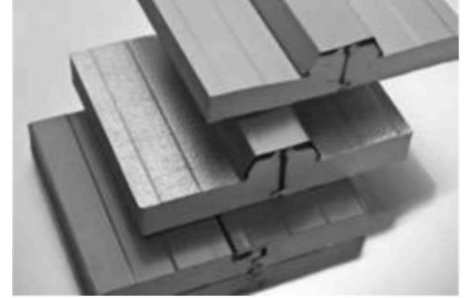


## SANDWICH PANEL ASSEMBLY DETAILS

The polyurethane-filled panels that are manufactured by using superior technology and which are the most ideal materials in thermal, water and sound insulation, offer many advantages to the users when compared to other alternative materials. The superior quality production can be achieved through the fastidious and sensitive controls during production. However, in order to have the highest efficiency from the utilization of the superior quality panels, the users also must pay due diligence to certain issues during assembly:



1. Before starting the panel assembly, one of the issues that must be considered is to determine the direction of the dominant wind. The panel assembly must be performed on the opposite direction of the dominant wind.
2. The number of the screws to be used in the assembly must be according to the status of the wind and at the amount required by the details.
3. During the assembly, must be careful for not squeezing the panel upper metal coatings and rubber-based shoes must be worn if possible.
4. For longitudinal overlays to the panel, there must be an overlay of at least 15 cm and the middle of two metals where the overlay is placed must be merged with a mastic tape and the joint must be supported with pop rivet or puller screw application.
5. The points such as eaves, corner, etc. that are open to the affect of wind must be affixed to each purline.
6. Silicon must be applied instead of overlay on the roofs where the slope is low.
7. The contact of the substances such as steel purline, concrete and plaster, etc. with the panel metal coating during the assembly must be prevented by means of an isolation material or dye.
8. The aluminum materials must be protected from water, snow and moisture from the moment they are shipped from the factory till the moment of assembly. (For avoiding oxidation problem)
9. While disassembling the panels to be assembled on the roof; the panels must not be placed in packs on points very close to each other, instead must be placed as to expand the load on the entire roof surface. The packs must be placed on the shear, not in the middle of purline.
10. Particularly in windy weathers, the open panels and panel packages must be connected very well to the construction in order to avoid their fly due to the wind. (If the facades of the construction where the assembly will be made is open, then the absorption power of the wind should be taken into consideration.)
11. Two or more persons must pay due diligence for not being on the same point during the assembly of the panel. (Because this load is point and through making deflection particularly in the corners of ridge and streams, it shows that it is not considered in the panel bearing tests.)
12. The panel pincer must be used during the assembly of the panel and the air transfer between two panels must be avoided.

13. The panels must be connected from all bearing purline and horizontal belts.

14. In terms of the health and aesthetic of the work being done, the accessories with minimum 0.50 thickness must be used.

15. All accessory orders must be placed not over the project, but by taking the measures on site as much as possible following the completion of the panel assembly. If there is a time related issue, then the wing lengths of such accessories must be kept long.



16. At the points where laths must be placed between the panels, the length of the lath must be minimum 150 mm through considering the inclination of the roof. (Double line water insulation must be made at the poverlay point.)

17. The best mechanical way to solve the water issue in the ridge and butts is to bend the tips of the panel that are inside the accessory. The other solutions are the chemical solutions that improve the safety and inevitable to be done.

18. Silicon or sponge must be used in the middle at the overlay place of the accessories particularly on the ridge and butt.

19. While connecting the panel to the steel construction during assembly, self-drilling steel screw is the ideal solution and using the twisted steel screw while connecting the panel to the concrete prefabricated construction is the ideal solution.

20. While connecting the accessories, using the puller screw to connect the sheet to the sheet and using pop rivet for connecting the sheet to the aluminum give better results than the other solutions.

21. The screws to be used in the assembly must be supported with EPDM sealed, wide capped washer, therefore, this element will prevent the entry of water from the screw points and enlarge the screw connection surface on the roof and facade at the wind's absorption position.

22. The tips of two panels on the ridge must be gathered together as much as possible and monolith insulation must be provided by placing glasswool or rockwool in the middle.

23. By basing on the plain upper ridge and the inclination of the roof, it should be designed as to go downwards 200 mm from the minimum panel tip for avoiding the entrance of water to the building due to the wind and after the tip of the panel is bended, bitumen absorbed sponge must be used.

24. While placing the accessory (the accessory to connect the roof panel and wall) orders of the building gable walls (front and rear), special attention must be paid on the rotation of the accessory on the roof panel rib as much as possible, otherwise, it will be hard to stop the water issue.

25. In the panel assemblies with craft paper, if the panel packages are exposed to sun for a long time, then it will be seen that their shapes change, and therefore the panels must be assembled in the shortest time possible after arriving to the work site and the last layer coating (membrane) must be done urgently. (for the panels that changed shape due to being exposed to sun, the panel must be moisturized a couple of hours before the assembly and flexibility must be recovered.)

26. Particularly the protective film coated painted sheet panels must be protected from sun. If the protective thin polyethylene films on the painted sheet are exposed to sun rays for long time, they will be excessively adhered to the panels and their disassembly during the assembly will be harder.