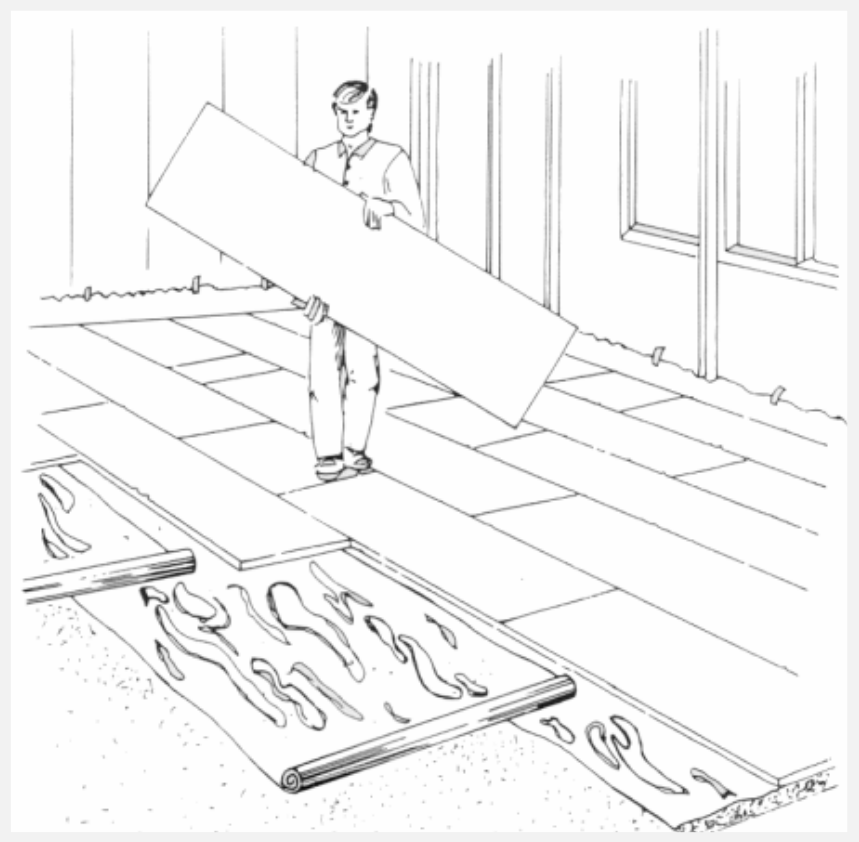

PARTICLEBOARD FLOATING FLOORS
INSTALLATION GUIDE

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Introduction

"Floating Floors" refers to the installation of Particleboard flooring over a sub-floor (usually concrete) where the floor is held in position by its own weight and by skirting at perimeter walls.

This Information Sheet covers the installation of Particleboard Flooring as a Floating Floor. The usual application is over concrete in order to improve comfort or to provide an economic base for high quality floor finishes over a rough sub-floor.

Floating Floors are used in flats and home units, factory work areas, offices and shops, schools, hospitals etc.

Note: The term "Floating Floors" has been used in Australia to signify acoustic isolation. While floors described in this data sheet can provide good resistance to sound transmission and to impact noise, the terminology is not the same as that used in the acoustic sense. "Floating Floors" is an international term referring to panel products loose laid over a concrete sub-floor.

The information in this manual only applies to those particleboard flooring products that carry one of the following EWPAA certification marks :

Site Storage

The principles of good storage as outlined in Applications & Installations Sheet Al 1 must be strictly followed. Particleboard sheets must not be exposed to dampness before installation. Battens and plastic sheet covering (as illustrated in Diagram 1) should be used. Before installation, Particleboard should be stored under conditions of temperature and relative humidity as will apply when installed.

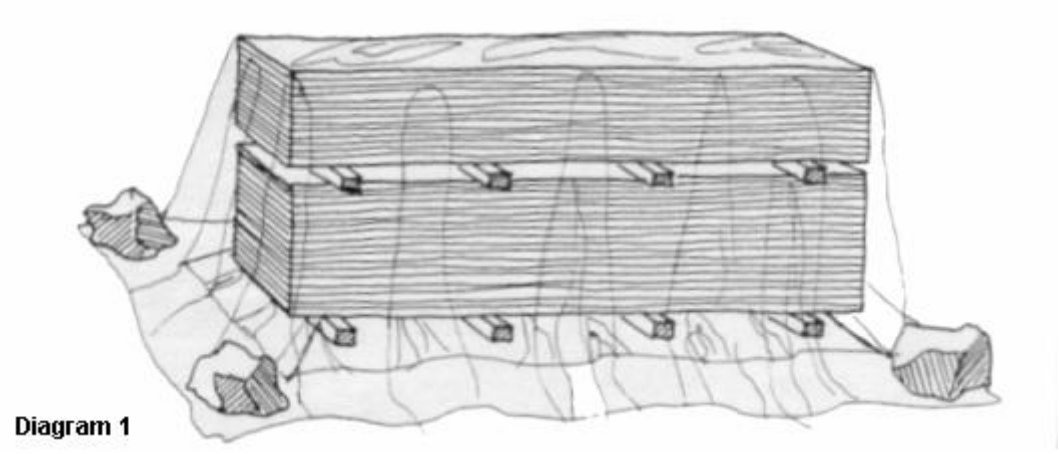

Diagram 1

Floor Systems

Rough Concrete Slab

Dry sand is used as a levelling agent and also acts as a sound insulator. Sand should be dry and of even particle size in the range of 0.5-5 mm. An even or close particle size range is important to avoid delayed compression or movement of the sand layer.

A level framework is set up first (see Diagram 2) with compartments of convenient size for placing and levelling the sand. This framework should be carefully removed as the job progresses and the spaces carefully filled with sand. Use pieces of board to avoid walking directly on the levelled sand areas.

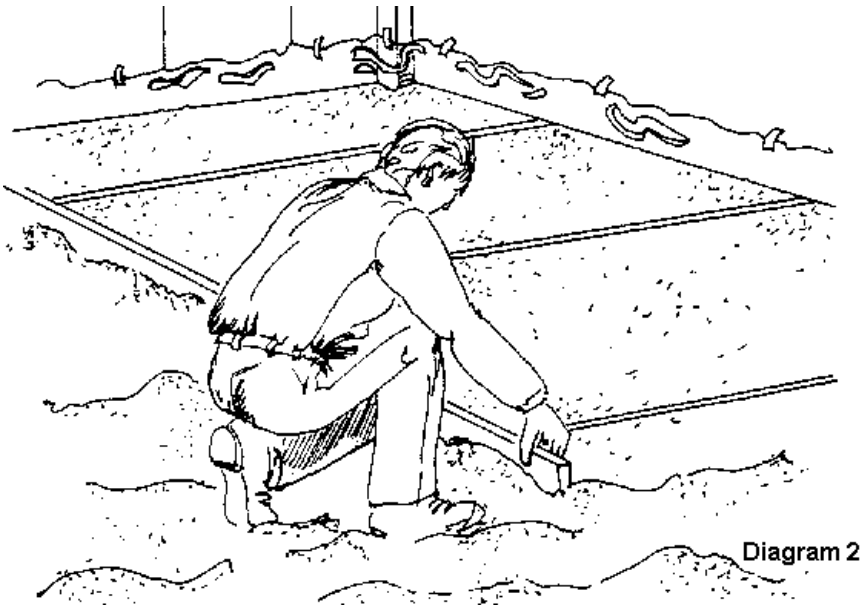

Diagram 2

The sand should provide a minimum cover of 10mm over surface peaks or pipes etc. Maximum sand thickness should not exceed 50 mm or it will need to be vibrated or otherwise compacted.

Once spread and levelled, the sand should be covered with plastic sheeting of thickness not less than 0.2mm. Sheet joins should be overlapped at least 500mm (Diagram 3).

To avoid loss of sand at perimeter walls, plastic strips should be laid around the floor/wall junction as illustrated in Diagram 4. This strip should extend under and over the sand by 100-150mm and should be folded down as illustrated and covered by the plastic sheeting.

Level Concrete Slab

On a concrete slab requiring no levelling or insulation, a layer of 10mm fibre insulating board (Caneite) should be laid first over the concrete surface. If the concrete slab is suspended and dry, standard Caneite should be used. If the slab is on ground or if there are any doubts about it remaining dry for any reason, then bitumen impregnated Caneite must be used. This is covered with 0.2mm plastic sheet with 500mm overlap of joins. (see Diagram 5).

Insulation

Polystyrene foam insulation can be used to provide an insulated floor. Foam density should exceed 16 kg/m3 and should be S, M, H or VH class according to Australian Standard AS 1366 Part 3 - 1992. Thickness should be not less than 25mm nor greater than 50mm.

Insulation sheets are laid directly onto the concrete slab. If the slab requires levelling, this is achieved with sand (as described above) and insulation is laid onto the sand. A vapour barrier of 0.2mm plastic sheeting must be laid over the insulation before Particleboard is installed. Joins should overlap at least 300mm.

See Diagram 6.

Termite Protection

In areas where termites may be active and the concrete slab is on the ground, suitable protection measures should be provided.

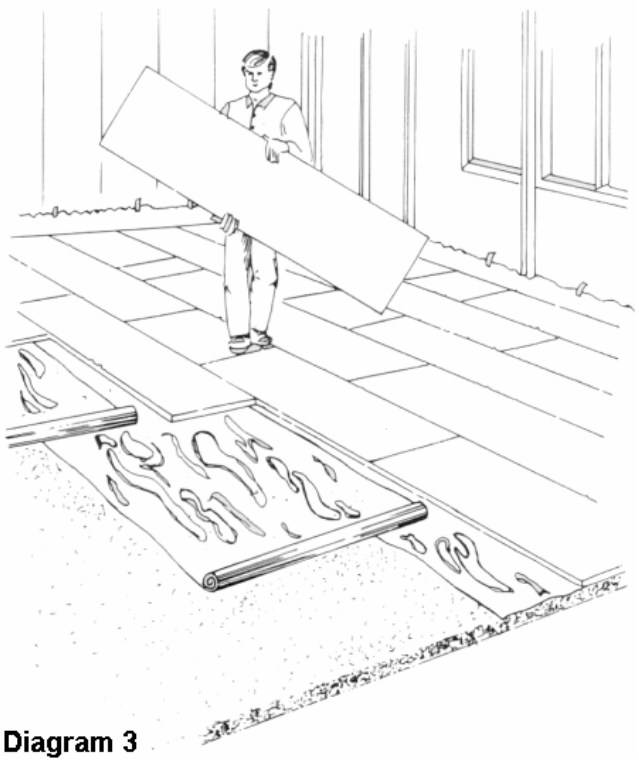

Diagram 3

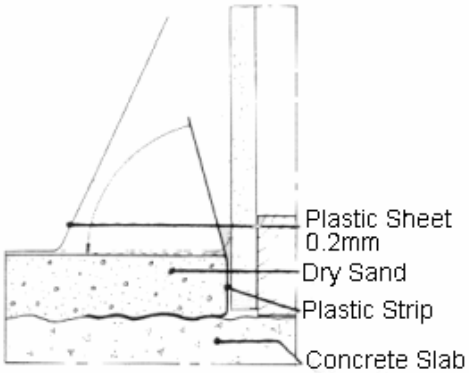

Diagram 4

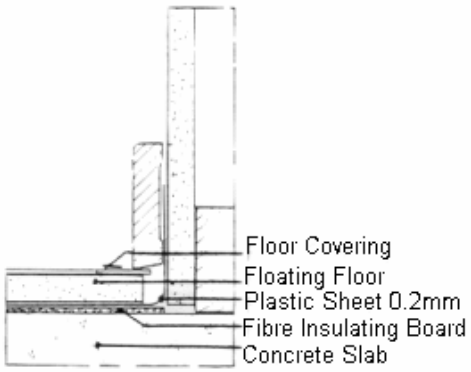

Diagram 5

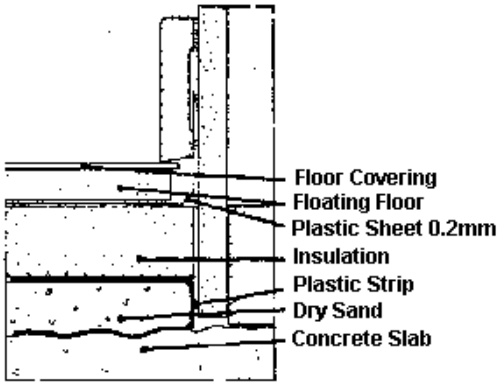

Diagram 6

Particleboard Installation

Particleboard Flooring should be 19mm manufactured in accordance with AS 1860.1 2001.

Standard Particleboard Flooring has tongued and grooved edges. However for Floating Floors the ends should be tongued and grooved as well. This requires a groove to be cut in each end of each sheet and the plastic tongue or spline inserted. Consult Particleboard manufacturers for supplies of plastic tongues and for information on cutting grooves if necessary.

Before installation of Particleboard flooring, the room must be dry. Wet trades (plastering, rendering etc) should be finished and any water spillage must be dried out.

Prior to installation, Particleboard sheets should be inspected and any faulty or damaged sheets should be set aside. Boards are laid with staggered joints (as in Diagram 3) with their long dimension at right angles to the insulation sheets (if used).

All tongue and groove joints must be glued using Particleboard flooring adhesive or any good quality construction grade adhesive. A bead of adhesive should be applied along the tongue of each sheet in sufficient quantity to give a visible squeeze-out when the adjoining sheet is pushed into position. Excess adhesive is removed before it sets. Some pressure should be maintained on the sheets while the adhesive cures. Wedges should be used between walls and Particleboard sheets and should be kept in place for 24 hours.

The floor should not be used for 24 hours to allow the adhesive to cure.

Expansion Joints

A clearance of 10-15mm must be allowed along all walls and around columns or other fixtures. This gap will later be covered by skirting.

In large floor areas an expansion joint should be provided every 8-10m. A joist or batten is fixed to the floor at the appropriate point and levelling and/or insulation material is finished up to the batten - see Diagram 7. Note the use of plastic strips (as in Diagram 4) to contain the sand on each side of the batten. Particleboard is laid onto the batten to provide an expansion gap of 20mm. The joint can be covered with a plastic or metal moulding, screwed into the batten.

If sand has been used for levelling, care must be taken to ensure it is compacted around the expansion joint area. Traffic on the floor may lead to a sand compaction of about 10%. This must be taken onto account to ensure that the Particleboard is evenly supported and not supported only by the expansion joint batten.

If partitioning is to be installed on the Floating Floor, it may be convenient to locate expansion joints under the partition.

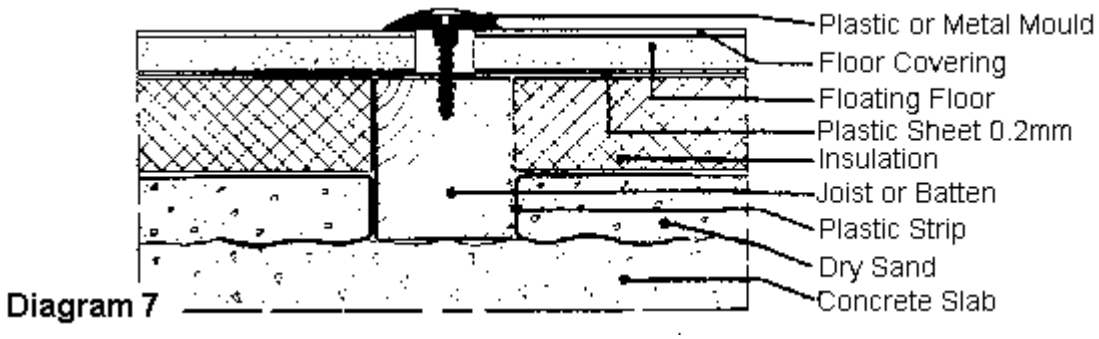

Diagram 7

Finishing

Resilient floor coverings, usually vinyl sheet or tiles are available in a very wide range. Installation procedures must follow manufacturer's instructions carefully, especially with regard to adhesives and underlayments.

Particleboard Flooring can be used for resilient floor coverings without underlay. However it is not possible to give a general recommendation. Some movement should always be expected with timber floors and it is not possible to guarantee that sheet edge will not show through soft, flexible floor coverings. In general, an underlayment is recommended.

No sanding or other preparation will normally be required for the installation of carpet. If there are rough or uneven areas, a light spot sanding with 40-60 grit paper should be all that is necessary.

Clear Finishing

Particleboard Flooring can be clear finished with polyurethane to give a cork-like appearance. However some colour variation between sheets is to be expected and spot sanding may contribute to colour variation. For these reasons a tint or stain may be an advantage in the clear finish.

Surface or corner imperfections or holes should be filled with appropriately coloured putty and clear finish applied according to manufacturers' instructions. Three coats are recommended.

Health & Safety Information

Refer to the Material Safety Data Sheet (MSDS) from the manufacturer. These are generally available from the manufacturers web sites. Refer to the back page for a list of these web sites.

Revision History

Revision	Changes	Date	Who
3	Updated certification marks.	06-02-2012	MB
2	Changed to stand alone document format as a part of the EWPAA / AWPA merger.	17-05-2010	MB
1	Initial Release – Content released on the Woodpanels web site.		

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IPL (West Coast) Ltd	NZ	+64 3 7626 759	+64 3 7626 789	
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