



ECOPLY® AND UNDER FLOOR HEATING

Floor heating systems may be used with Ecoply® Flooring, subject to the following building practices and subject to installation of the heating system in accordance with manufacturers and regulatory requirements.

ADHESIVE DURABILITY

Ecoply® Flooring contains a thermosetting Phenol formaldehyde adhesive that is fully cured in a hot press at over 140 degrees Celsius.

The bond is not reversible subjected to normal exterior climatic cycles. On this basis, heating ducts or elements in the floor will have little or no effect on the Phenolic glue line durability. Conversely, heat is known to have a detrimental effect on Urea based adhesives used in some flooring boards and, according to NZS 3604 these should not be used where temperatures may be over 40 degrees Celsius. The heat can break down the urea bond, and lead to unwelcome emissions.

Phenolic bonded Ecoply is therefore recommended in place of Urea bonded boards when there is a possibility of high temperatures close to the boards.

WOOD PROPERTY EFFECTS

The other component of the plywood is radiata pine solid wood veneer. This provides an excellent base for attaching heating hardware. The panel ex-mill has low moisture content (typically 10 to 14%). Normally, rain or construction moisture may increase this without detriment to structural performance, though some staining may occur with water and surface dirt, and allowance is usually made for swelling with expansion gaps around sheet edges.

However, for use with heated floors, CHH Woodproducts strongly recommend very tight moisture control by way of protection before, during delivery, and during construction. It is expected that the high concentration of heat in the floor will reduce the in service moisture level to less than 10%. If panels are allowed to become wet before



Information contained in this document is specific to the CHH Woodproducts range of plywood products and cannot be used with any other plywood products no matter how similar they may appear.

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FLOORING

fixing, swelling and sheet expansion may occur. This would be followed by shrinkage that could cause problems in the movement of framing and fittings. Likewise, it is highly recommended that kiln dry framing (e.g. Laserframe) be used with heated floors.

If the Ecoply Flooring is kept dry (prior to fixing heating hardware and during construction) these effects will be minimised, and the floor may be improved by using a reduced expansion gap. Some surface checking of the panels may occur if they become very dry during heating but this is normal, does not affect the structural performance, and would usually be obscured by floor coverings.

To assist with the above builders should consider laying Ecoply Flooring in the area to be heated, after the roof is on.

EXISTING FLOORS

Where heating is desired on an existing urea bonded board floor, CHH Woodproducts recommends lower temperature systems or replacement of the boards with Ecoply Flooring to avoid emissions and potential failure.

In place of 20 mm particle or fibreboard flooring 15, 17 or 19 mm plywood can be used, depending on joist spacing and loading. On other flooring types and for specifics relating to different systems, consult the heating hardware manufacturer.

For full details on the use of Ecoply Flooring refer to current Ecoply specification and installation guide.

LIMITATIONS

The information contained in this document is current as at March 2014 and is based on data available to CHH Woodproducts at the time of going to print.

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