



# Eccovoid

## Collapsible void former

### Uses

To separate concrete slabs, ground beams and pile caps etc from unstable expansive soils that can exert significant swelling pressures on structural foundations. Eccovoid provide a temporary support for the concrete during curing but collapse over time as the cardboard product biodegrades naturally.

### Advantages

- Environmentally friendly
- High load capacity when dry
- Light weight and easy to install
- Fully glued units are easy to cut into odd shapes
- Can be stacked to achieve greater void depths
- No assembly required

### Description

Eccovoid is a honeycomb bonded partition panel selected for its uniformity of manufacture and exhibiting excellent dry strength properties.

It will support the weight of construction traffic, reinforcement and wet concrete until the cured concrete gains sufficient strength to be self-supporting.

Be aware that the ground and atmospheric ambient moisture conditions are critical to the successful utilisation of this product and hence it **must be used only in dry conditions**.

Eccovoids are used to separate slabs and ground beams from unstable expansive soils.

Eccovoids will break down by the absorption of moisture and / or from soil bacterial attack to create a void beneath the slab or beam.

Eccovoid is made from 400 micron cardboard with a honeycomb cellular core between face sheets. Because they are of glued construction they can be easily cut on site to fit most situations.

### Design Criteria

Geological data indicates that unstable expansive soils occur in all states of Australia but in particularly in the eastern states.

Building foundations and ground slabs interrupt the natural evaporation of soil moisture and cause a build up of its moisture in the ground beneath the structure which leads to the swelling of the sub-foundation clays.

Tests by the Queensland University of Technology (QUT) show that the time required for swelling pressures to cause damage is generally a min of 14 days or longer.

Upward movements of the soil vary with the depth and type of clay deposits.

Exploration of the soil profiles for any structure should be undertaken by experienced and properly qualified soil testing engineers.

Approximated void former depths for known heave values:

Potential Heave	Void Former Depth
60 mm	100 mm
100 mm	150 mm
150 mm	200 mm

### Working loadings

The following working loading is suggested using fully dry materials; any moisture contaminating the material will reduce this working load.

Standard Eccovoid 3.0 tonne/m<sup>2</sup>

For working loads above 3.0 tonne/m<sup>2</sup>, contact Parchem for further advice.

### Installation Instructions

#### Transport and Site Storage

Eccovoid void formers are made from 400 micron cardboard and throughout their use this must be taken into consideration. Moisture either induced or natural, is the key to degradation and hence they **MUST** only be used in dry conditions with the utmost care being taken to keep moisture away from the product until the concrete has achieved its self supporting strength otherwise premature collapse will occur.

Delivery of void formers to site **MUST** be organised so that they can be used immediately to minimise exposure to the elements.

Transport, store and handle the product in such a manner as to keep it off the ground and undercover in order to keep it dry and allow the air to circulate and prevent condensation at all times.

#### Bar chair positioning

The concentrated loading from bar chairs must be spread to avoid puncturing the face sheet.

Flat based chairs can generally be used straight on the surface.

Wire leg type bar chairs will require bar chair plates under them to prevent puncturing the surface sheets.

Generally more bar chairs are required to reduce the puncture loadings on the Eccovoid void formers.

#### Installation

Use minimum 0.2 mm thick polythene sheeting on the top side of the boxes to help protect the void former from the elements and the wet concrete. This also helps protect the underside of the slab from moisture. The boxes shall be placed together so that the concrete cannot fall down between the boxes. The polythene sheet is to be lapped 150mm at joins and taped. Take the polythene sheeting down

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the sides and across the bottom of beam trenches. The poly-wrap around the boxes is to be slashed prior to placing polythene overlay.

Minimise the traffic over the boxes where possible and use planks over them for heavy traffic areas to reduce chance of surface puncture. Use bar chair plates (min 200 mm diameter) under bar chairs to distribute the load of the reinforcement prior to placement of the concrete. Care should be taken when pouring concrete so that concrete is placed evenly over boxes and not dropped or heaped in one spot to minimise excess loads. Concrete should not be poured from heights greater than 400-450 mm. If any doubt on the bar chair loading, increase the number of bar chairs.

Take care when applying construction loads so damage to the boxes, by dislodging and distortion of the internal partitions and external covers, is avoided.

Note: boxes MUST be installed and concrete poured as soon as possible, preferably the same day. Any time delays could jeopardise the satisfactory use of the material.

Any boxes that are damaged or become wet during and after installation must be replaced. It is important to remember that concrete should not be poured over void formers if they are not dry or in good condition.

## Limitations

Eccovoid void formers are designed for a particular purpose and sometimes delays to construction may be necessary to accommodate the nature of the product. When contractors are using void formers, they should remember the product limitations and take great care and consideration during construction to avoid problems.

Customers should satisfy themselves as to the suitability of the product for its intended use.

## Estimating

### Supply

- Eccovoid standard sheet size is 2.40 m x 800 mm (1.92m<sup>2</sup> per sheet)
- Eccovoid is available in thickness; 50, 75, 100, 125, 150, 175 200 and 300 mm
- Eccovoids can be supplied (at additional cost) wrapped in 100 micron heavy duty plastic bag if required

### Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

### Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.