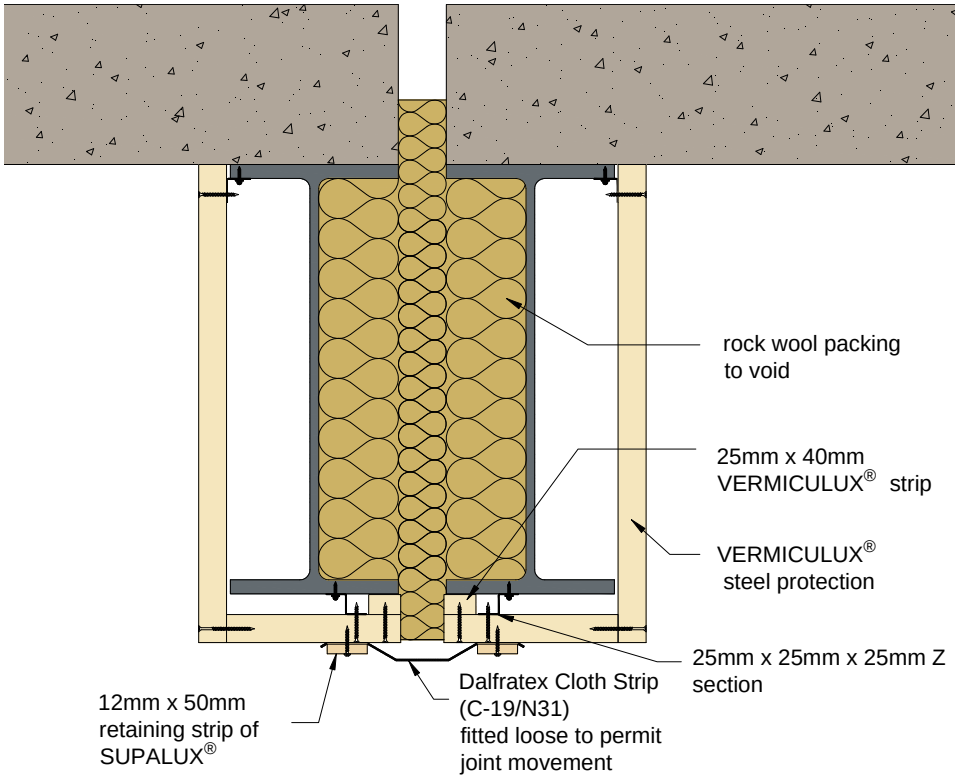
VERMICULUX® Protection to Structural Steel
Movement Joints at Slab Perimeter Beams



Introduction

Movement joints may occur between adjacent concrete slabs that are supported by parallel structural steel beams. The beams will not necessarily be directly connected, but will require to be fire protected .It is also likely that the fire resistance of the slab is required to be maintained through the slab at the joint position.

Provision for differential movement may be in one or more planes. Fire protection must therefore be installed in such a way that the anticipated movement (amplitude and directions) between the sections does not cause disruption of steel encasement either in normal, or in fire conditions, and does not compromise the fire separation through the deck.

The most appropriate construction will depend on a number of factors, such as the size of the structural sections, the fire resistance period and gap size, and the degree of movement to be accommodated.

Discussion

The illustration above typically indicates the essential elements that require to be considered. The two beams may be protected as two separate sections, using a light gauge Z section to support the soffit board on each side of the joint, thus isolating any movement between the two soffit sections.

It is essential that the gap between the sections is closed and provides an equivalent amount of insulation material to protect the edge of the lower steel flange. The use of Dalfratex (neoprene coated) cloth will provide a flexible cover across the joint that will also provide a fire integrity barrier in fire conditions.

Packing the void between the slabs with rock wool should in most instances be sufficient to maintain the fire separation requirement through the slab itself. A proprietary movement joint plate (not shown) will normally be used on top of the slab, if this is an accessible area.

For further advise contact Promat Technical services department. Tel: 01344 381 400

AUTHORITY: **Promat Recommendation - Based on in-house knowledge and Technical Experience**

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