



# Building Newsflash

## Lead Flashing Alternatives for Roofs Collecting Potable Water

### Purpose

To advise building certifiers, building practitioners and others of the alternatives to lead flashings used on roofs to collect potable (drinkable) water for rainwater tanks.

### Background

The Building Code of Australia 2006 (BCA) Volume 2, Part 3.5.1, prohibits lead flashings to any part of a roof that catches potable water. Lead flashing is commonly used on roofs where stepped flashing is required, for example where a roof is flashed at the junction of a masonry exterior wall.

From 1 January 2007, new houses in South East Queensland must comply with Part 25 of the Queensland Development Code – Water Saving Targets. Installing a rainwater tank is a common method of complying. Generally rainwater tanks are only connected to toilets and washing machine taps, however additional connections may be made and residents may choose to use the rainwater for a potable purpose. Therefore, lead flashings must not be used, as toxic lead leaches into the run-off.

Alternatives to lead flashing include -

- malleable coated aluminium;
- malleable zinc; and
- colorbond or zinc aluminium (for rigid profile - rigid flashings are shaped by manufactures to suit the profile they are to seal).

Note that metals which come into contact with other metals must also be compatible. When incompatible metals come into contact, a process called galvanic or bi-metal corrosion occurs in which corrosion of one of the two metals is accelerated due to an electric current that is formed between the two metals. The BCA Volume 2, Table 3.5.2 sets out the acceptability of contact between different roofing materials and provides a guide on which metals are compatible in severe and moderate environments.

### Legislation

*Queensland Development Code- Part 25 Water Savings Targets* specifies the water saving targets for class 1 buildings. Part 25 provides detailed information on the requirements for rainwater tanks. The Code can be found online at - [www.lgp.qld.gov.au/Default.aspx?ID=247](http://www.lgp.qld.gov.au/Default.aspx?ID=247).

*Public Health Act 2005, section 59* stipulates lead or any substance that contains lead must not be part of a roof system coming in contact with potable water. The Act can be accessed at - [www.legislation.qld.gov.au](http://www.legislation.qld.gov.au).

*AS/NZS 2904:1995 Damp-proof courses and flashings* specifies the requirements for the commonly used damp-proof courses including the material specifications and the applicable performance criteria. The Standard can be purchased from Standards Australia through the SAI Global website at - [www.saiglobal.com/shop/scrip/search.asp](http://www.saiglobal.com/shop/scrip/search.asp).

## **Other Reference Material**

*HB230-2006 Rainwater Tank Design and Installation Handbook* provides information on the collection, storage and use of rainwater in the urban environment. Contaminants such as lead are covered in detail. The Handbook is associated with the Standard *AS 3500 Plumbing and drainage* and can be purchased from Standards Australia through the SAI Global website at - [www.saiglobal.com/shop/scrip/search.asp](http://www.saiglobal.com/shop/scrip/search.asp).

*Guidance on use of rainwater tanks – enHealth 2004* provides detailed information on design and installation of rainwater tanks including the potential contribution of rainwater tanks to improved water conservation. Risks of using lead flashings on roofs to collect potable water are addressed. The Guide can be accessed at - [www.health.gov.au/internet/wcms/Publishing.nsf/Content/3D981B51B4FB458DCA256F1900042F6E/\\$File/en\\_v\\_rainwater.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/3D981B51B4FB458DCA256F1900042F6E/$File/en_v_rainwater.pdf).

*The Australian Drinking Water Guidelines 2004* provide a comprehensive framework for managing the supply of safe drinking water. Health and safety issues are covered in detail, including the acceptable contaminant levels of lead in drinking water. The Guidelines can be accessed at - [www.nhmrc.gov.au/publications/synopses/eh19syn.htm](http://www.nhmrc.gov.au/publications/synopses/eh19syn.htm).

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