

Ceiling waste.....there is a better way.

CURRENT PRACTICE

For more than 30 years in Australia, vast quantities of wet felted mineral fibre ceiling tiles have been installed as acoustic ceilings in commercial buildings and offices. More than 4 million square metres each year is installed in Australia with little thought as to where this material will end up at the end of its life cycle. The impending demolition, replacement and refurbishment of many of these buildings as they reach the end of their service life raises a valid question. What will happen to all of this ceiling material? *The reality is that it is all bound for landfill.*




The term “wet felted mineral fibre” refers to acoustic ceiling products supplied by the major multi-national manufacturers who between them supply about 95% of the Australian market for suspended acoustic ceilings. The products are comprised of mostly re-cycled materials; cellulose (paper fibre), slag fibre along with perlite, kaolinite and starch binders. A wet mixture of these raw materials is moulded and cured into ceiling tiles. From an environmental standpoint the manufacturing of wet felt ceilings is highly rated because of the high degree of re-cycling and the low embodied energy of the process. However, none of these manufacturers have factories in Australia, nor is there any facility to recycle the material at the end of its life. *From a purely Australian environmental standpoint, these highly commended manufacturers are providing more than 17,000 tonnes each year potentially for Australian landfills. Is this what we really want?*



WHAT CAN BE ACHIEVED

Unlike wet felt mineral fibre ceilings, Rockfon is a homogenous material, made from stone wool, a non-combustible, thermal and acoustic insulation board providing higher levels of sound absorption, humidity resistance and dimensional stability for the full life of the building. *At the end of its life cycle, Rockfon can be accepted back for conversion into thermal and acoustic insulation materials, saving energy for another full building life cycle.* Having been manufactured from a pure insulation material, it is a simple matter to convert it into another form of insulation. Stone wool has been re-cycled in Australia for more than 10 years.

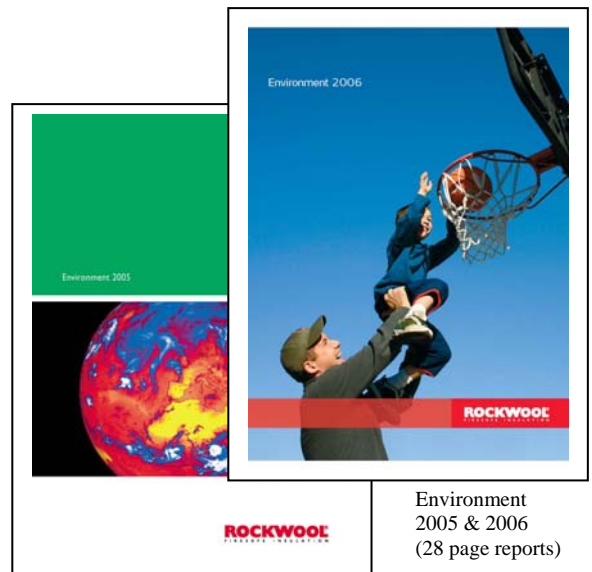
1. **Relieve landfill of large quantities of bulky, non-degradeable building waste**
2. **Recycle waste ceiling into low cost, high performing thermal and acoustic insulation**
3. **Achieve only positive environmental outcomes during and after service life of ceiling**

 <h1 style="text-align: center;">ENVIRONMENTAL CHECK LIST</h1>			
ASPECT	MINERAL FIBRE	ROCKFON	COMMENT
RAW MATERIALS Hazardous content (IARC)	Paper fibre, starch, slagwool, perlite, kaolin, quartz, water-based paint Group (2A) <i>Probably carcinogenic</i>	Volcanic rock, phenolic binders, glass tissue, water-based paint Group (3) <i>Not classifiable in terms of carcinogenicity</i>	Both products made mostly from non deplete-able raw materials and have a high proportion of re-cycled base material used in the process Some crystalline silica remains in mineral fibre Stone wool listed as Group (3) ,Oct 2001 after a 14 year period of intensive international scientific research
MANUFACTURE	Limited information available in the public domain	Full details of emissions during production provided over many years	Refer to Rockwool Group 2006 Environment Report which can be downloaded at: http://www.rockwool.com/sw3341.asp
INDOOR CLIMATE LABEL	Not provided	Class 10 emission time for gas and “low particle emission.”	Comprehensively tested for particulate and VOC emissions
BIO-RESISTANCE	Base material is highly organic and will sustain micro-organisms.	Base material is inorganic and will not sustain micro-organisms	See test report: Industrial Microbiological Services Ltd <i>Determination of the Resistance of Pre-Conditioned Ceiling Tiles to Surface Mould Growth</i>
RE-CYCLING	YES	YES	All mineral fibre and all Rockfon factories have extensive re-cycling infrastructure and capability
RE-CYCLING IN AUSTRALIA	NO All mineral fibre tile material is destined for land fill	YES - Base material (stone wool) has been recycled in Australia for more than 10 years	Facilities are available for the re-cycling of Rockfon in Sydney, Melbourne, Brisbane, Adelaide and Perth. All recycling of mineral fibre takes place at overseas plants.
END OF LIFE	Degradability limited	Degradability limited	Both products have a limited capability of dissolving in an acidic solution. However, buried in a large mass they are unlikely to completely degrade.

The full story on the environmental sustainability of stone wool materials can found in the 2006 edition of the Rockwool Group publication ENVIRONMENT.

Rockwool Group provides an annual report on its environmental initiatives and impacts of the production of their acoustic and thermal insulation and ceiling products. This publication is available from AIS or can be down-loaded from the Rockwool Group website (<http://www.rockwool.com/sw3341.asp>).

For further information on Rockfon acoustic ceiling systems contact your local distributor or AIS.



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