

LABORATORY CEILINGS – THE ULTIMATE CHALLENGE FOR ACOUSTIC CEILINGS

The construction of laboratories in Australia is generally performed in accordance with Australian Standard 2982:1:1997 *Laboratory design and construction*. The requirements for this type of building are very demanding in terms of cleanliness, dust minimization, control of micro-organisms, ease of cleaning, durability of materials and long term performance. Unfortunately the standard makes no consideration for room acoustics and speech intelligibility which usually means that all surfaces are hard, reflective and prone to produce excessive reverberation. As many of these buildings are used as teaching laboratories the need for improved room acoustics is obvious. The Australian Standard contains arbitrary statements about the required nature of the surfaces and appears to rule out any porous surfaces for wall and ceilings. Despite this requirement in Australia, Rockfon has been supplying laboratory ceilings with a micro-porous surface throughout Europe for many years.

The Rockfon MediCare range of acoustic ceiling tiles contains a product that was developed to meet the very high performance requirements for laboratory buildings. Rockfon MediCare Ultra offers the ultimate in ceiling resistance to micro-organisms, ease of cleaning, resistance to moisture and humidity while providing very high levels of sound absorption (NRC 0.90), providing the ideal environment for learning in the laboratory. While the surface of Rockfon is micro-porous to allow acoustic absorption, there is a water-repellent layer immediately behind the surface which prevents water absorption.



Specifiers and clients in Australia are recognizing the need to build in higher performance aspects for the ceiling which has resulted in a growing number of projects proceeding with Rockfon MediCare Ultra.

All Rockfon ceiling products have properties that make them superior to most other suspended acoustic ceiling tiles. They are made from compressed stone wool, a homogenous, inorganic material which offers no sustenance to bacteria, mould, fungi and a wide range of micro-organisms. Rockfon MediCare Ultra also achieves a clean room standard of Class M2.5 (10) ASTM FS 209E. The base material is non-hygroscopic in nature and will not absorb moisture from the atmosphere which ensures dimensional stability and no sagging of tiles for the life of the installation. The base material is also a fire protection grade of stone wool and when installed with the appropriate grid can provide 60 minutes fire resistance (BS 476 Pt 21 & 23).

Full performance details for Rockfon MediCare Ultra can be found on the data sheet at the Rockfon website, or feel free to contact us at AIS and we will forward a PDF copy by email.



Mould & Micro - organism resistance plus

Comparison of micro-organism resistance of wet felted mineral fibre tiles with Rockfon stone wool - resin bonded mineral wool tiles

Rockfon suspended ceilings are made from Rockwool stone wool (resin bonded mineral wool) which provides unique properties when compared to wet felted mineral fibre ceilings. Containing no cellulose fibres or other organic nutrients, Rockfon products are mould resistant, non-hygroscopic, dimensionally stable, and they achieve Euro Class A fire safety and ISO Class A sound absorption - thereby contributing to top level HTM compliance.

Rockfon MediCare ceiling solutions represent good whole life value and performance for healthcare projects.

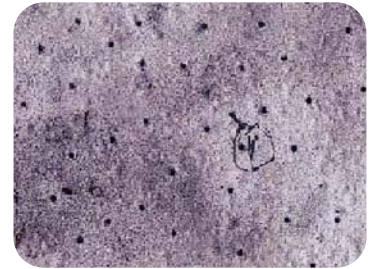
Rockfon stone wool resin bonded mineral wool ceiling tiles are different to traditional wet felted mineral fibre tiles. Rockfon stone wool tiles have many features and benefits. These include inherent enhanced resistance to micro-organisms. Unlike wet felted mineral fibre tiles which typically contain cellulose fibres, non water repellent binders and require additives to enhance their dimensional stability, fire safety, and resistance to micro-organisms, with Rockfon it's inbuilt safety - Rockfon stone wool tiles do not contain cellulose fibres, nor do they contain water absorbing binders or organic nutrients.

Comparative micro-organism resistance tests completed by BSRIA* indicate the differences between wet felted mineral fibre tiles and Rockfon stone wool - resin bonded mineral wool tiles.

The overall results show that Rockfon stone wool - resin bonded mineral wool tiles performed significantly better than the other tiles.

* Ceiling tile properties Report BSRIA - October 2002

A wet felted mineral fibre healthcare tile showing micro-organism growth



Another wet felted mineral fibre tile showing micro-organism growth



Rockfon stone wool - resin bonded mineral wool tile showing no micro-organism growth

