



**Acoustic Damping for
Metal Profile Ceilings**

BB93 Solution

HTM 08 01 Solution



**sound
reduction
systems**

Manufacturers of Acoustic Insulation Products



Introduction

Benefits

- ✓ BB93 Solution to rain noise in schools
- ✓ HTM 08 01 Solution to rain noise in healthcare buildings
- ✓ Improves learning and working conditions
- ✓ Reduces rain noise through all metal profile roofs
- ✓ Manufactured in association with **DEDPAN** Technology
- ✓ Supplied in self adhesive rolls and strips
- ✓ Extremely high performance
- ✓ Ideal for both New Build and Retro-fit installations
- ✓ Tested to BS EN ISO 140-18
- ✓ Only 1mm thick



Introduction

Acoustic innovators, Sound Reduction Systems Ltd, in association with **DEDPAN** Technology, have developed the perfect acoustic damping material to reduce the noise generated by rain falling on metal profiled roofing systems.

Rain falling on these types of roofs causes a nuisance in many different environments, ranging from commercial offices to industrial factory units. The problem has been highlighted in the BB93 design guide on acoustics within schools. Referring specifically to the issue mentioned above, the guidance of BB93 is to provide 'damping of the profiled cladding (e.g. using commercial damping materials)'.

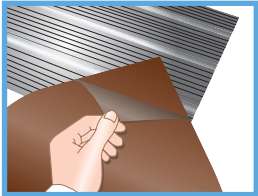
The problem of rain noise on profiled metal roofing systems is a well documented one, yet a test procedure to measure rain noise in the laboratory was only officially published in 2006. BS EN ISO 140-18 outlines a method of simulating rainfall under ideal conditions, using a water tank with a perforated base suspended above the test specimen, with a receiver room below. The application of Raincheck provides significant improvements to the overall roofing system under these test conditions.

SRS Raincheck is the perfect solution to the issue of rain noise in commercial, industrial and educational environments. Should you require further details, or to discuss your particular application in greater detail, please feel free to contact our industry leading technical team on **01204 380074** or email **info@soundreduction.co.uk**

A Raincheck demo is available to view on our You Tube Channel: **www.youtube.com/soundreduction**

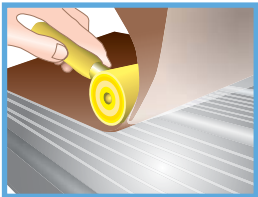
Installation

- Prior to installation, it is essential that the surface to be treated with Raincheck is clean and dry.

- Raincheck is quickly and easily installed on the metal profiled sections. Simply remove a section of the backing paper and adhere the Raincheck strip to the metal profile. The lightweight, flexible material will easily mould to the contours of the roofing system.
 

- Work your way along the profile in small stages, removing small sections of the backing paper and compressing the rain check material to the profile as you go.
 

Ensure that there are no air pockets in the material. If an air pocket develops, you can burst the pocket with a trimming knife and press the material back down.

- Moderate hand pressure should be fine to achieve a good bond, however, if a stronger bond is required, a hand roller can be used to ensure a more even application of pressure across the surface of the Raincheck.
 

- For the best results, SRS recommend that a surface area equivalent to 60% of the total roof size is treated with the Raincheck product, using an even distribution of the material across the space.

PHYSICAL PROPERTIES:

Colour: Green Adhesive Type: Acrylic P.S

Weight: 1.90Kg/m²

Flexibility (bent around a 30mm mandrel): Flexible to 5°C

Thickness: 1.0mm

Maximum Temperature Tolerance: 190°C (short exposures)

Flammability: Pass FMVSS 302

Acoustic Performance:

Plots of Sound Intensity Level

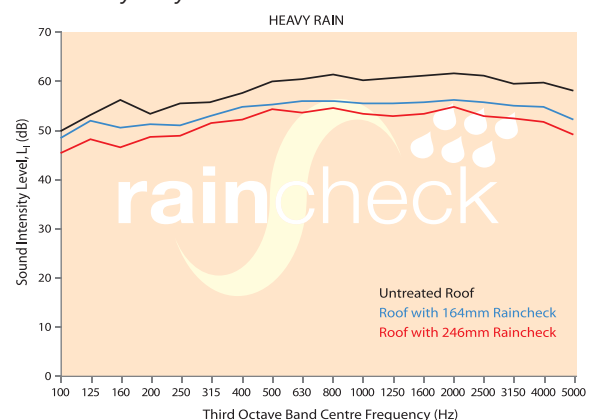
BS EN ISO 140-18:2006 outlines a method of simulating rainfall under laboratory conditions using a water tank with a perforated base, suspended above a test specimen.

Measurements are taken below the specimen within the receiving room to assess the sound intensity level re 10⁻¹² W/m² (dB). The lower the sound intensity level within the receiver room, the greater the effect of the damping material.

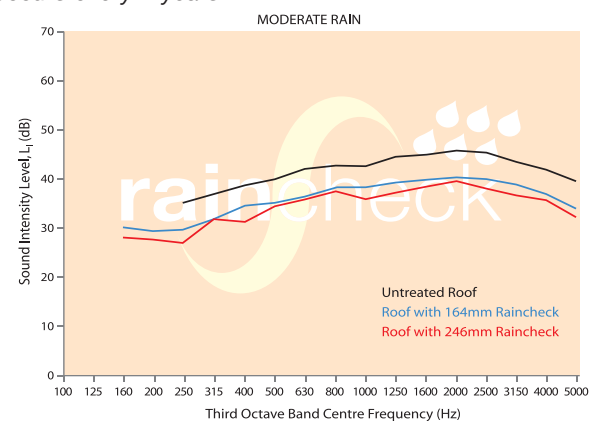
In the acoustic tests below, measurements of sound intensity for each type of rain condition were made directly in accordance with BS EN ISO 15186-1:1997 and BS EN ISO 140-18:2006.

Test subject : (3.7m²) 5no 400 x 2102mm, 0.9mm gauge, 3.5kg/m², ribbed aluminium standing seam roof with stucco emboss installed at a pitch of 7° below the water tank. Test Reference: WS219329

Heavy Rainfall - Simulated conditions for rainfall that occurs every 50 years



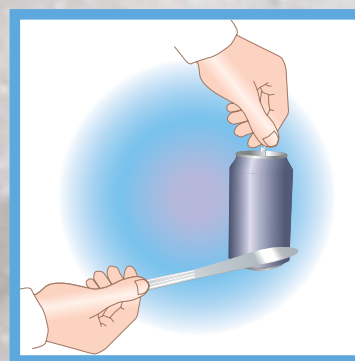
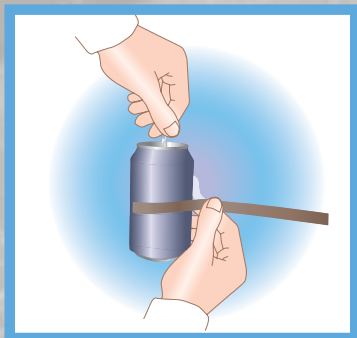
Moderate Rainfall - Simulated conditions of rainfall that occurs every 2 years



Structure	A-Weighted Sound Intensity Level L _A (dB)	
	"Heavy" Rain	"Moderate" Rain
Untreated Roof	70.6	54.1
Roof with 164mm Raincheck/40% roof coverage	66.0	49.4
Roof with 246mm Raincheck/60% roof coverage	64.3	48.1

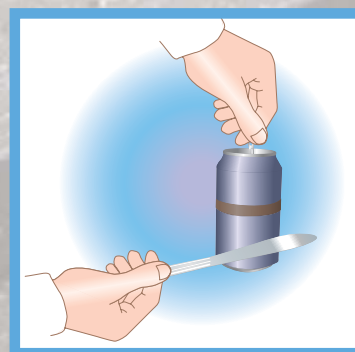
The SRS Raincheck Challenge

- 1 Hold a tin can by the ring pull at the top and use a hard object, such as an item of metal cutlery or a metal pen to strike the can. You will clearly be able to hear the 'tinny' sound of the can resonating in the room.



- 2 Remove the backing paper and apply the 'Raincheck' strip around the middle of the can.

- 3 Striking the can with only a very small percentage of total surface area treated with 'Raincheck' produces an extremely different effect. The damping effect of 'Raincheck' dramatically reduces the vibration of the can, producing a very dull thud.



raincheck



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