

Sound Damping Steel



Description

Sound Damping Steel is manufactured from two layers of sheet steel bound together with a thin energy absorbing visco-elastic core. The core is designed to reduce sound transmission loss by eliminating resonance.

Sound Damping Steel is sold in flat sheets and can be sheared, punched, drilled in the same way as conventional sheet steel. It can be manufactured using Mild Steel, Zintec, Aluminium, and Stainless Steel etc.

Applications

Sound Damping Steel is used extensively for manufacturing Waste extractors, chutes, hoppers, storage bins, conveyors, ventilation ducts etc.

Specification

Operating Temperature	Up to 120°C Continuously
Thickness of Visco-Elastic Core	0.14mm
Available Sheet Thickness's	Any standard gauge sheets are used up to 4mm

Acoustic Performance

The tendency for sheet metal to resonate or ring is characterised by its 'Q' factor. When Sound Damping steel receives an impact, its vibration response is critically dampened. The table below compares the acoustic performance of untreated sheet steel with Sound Damping Steel of the same overall thickness.

Materials	'Q' factor
Untreated sheet steel	150
Sound Damping steel	5

Fabrication

Where possible equipment manufactured using Sound Damping Steel should be designed using flat sheets. Although it can be sheared, punched, drilled and riveted. It can also be folded providing the maximum bend radius doesn't exceed three times the overall thickness, otherwise bowing may occur.

The sheets can be spot welded providing an electrically conductive bridge is made between the top and bottom sheets. The welder should be set for minimum air pressure, minimum current and maximum time. Other forms of welding may be used but distortion may take place if too much heat is applied. Welding of Sound Damping Steel should be carried out in a well ventilated area preferably with extraction.