

APPLICATION STORY

tesa makes sure sound is no barrier

When a leading global supplier of engineered noise control products and testing services experienced a problem in the manufacturing process of its sound-proof doors, tesa was approached for a solution.

Application and current method

Stiffeners, inserted to provide product rigidity, were traditionally joined inside the panels and doors by spot welding.

Customer issue

This conventional method left surface marks which took extensive sanding and finishing to remove. The quality of the paintwork around the spot welded areas was often below standard and re-working, along with additional incurred costs, had to be factored in as a result. The main objective was to find an alternative bonding solution capable of improving both the application and the processes involved.

tesa assessment and proposal

The customer team from tesa carried out an assessment and testing programme using 19mm tesa® ACX^{plus} 7074 as a recommended alternative to spot welding.

Assessing tesa® ACX^{plus} 7074's bonding power involved extensive testing on mock panels / doors and different lengths, thicknesses and widths of stiffener. The test specimens were heat cured at 'actual' temperatures and hung in different positions and sequences for varying lengths of time, with the result that product performance was positively signed off.

Outcome

Bonding was found to be effective and as strong as spot welds, while the steps involved in production were minimised and the customer is now benefitting from time savings amounting to over 50 hours a month.

As results of the tests showed, significant advantages can be found in its high temperature resistance. Adding to this, the strength of tesa® ACX^{plus} bonding power can also be seen in its weather resistance and the ability to absorb dynamic forces and vibrations to provide stress relief in bonded joints – features that make it particularly well suited to moving parts, such as acoustic doors, which need to withstand the strain of repeated usage in long-term indoor and outdoor applications.



Finished door (open)

tesa UK Ltd,
Yeomans Drive, Blakelands, Milton Keynes, MK14 5LS
Tel: 01908 500333
Email: ukenquiry@tesa.com

tesa.co.uk

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