

TECHNICAL BULLETIN

INTUMESCENT AND ACOUSTIC PADS AND COVERS



ABOUT BEAMA

BEAMA is the long established and respected trade association for the electrotechnical sector. The association has a strong track record in the development and implementation of standards to promote safety and product performance for the benefit of manufacturers and their customers.

This publication informs on the use of intumescent and acoustic pads and covers with electrical wiring accessories.

This publication has been produced by BEAMA's Building Electrical Systems Sector operating under the guidance and authority of BEAMA, supported by specialist central services for guidance on UK Internal Market, European Single Market, Quality Assurance, Legal and Health & Safety matters. BEAMA's Building Electrical Systems Sector comprises of major UK manufacturing companies.

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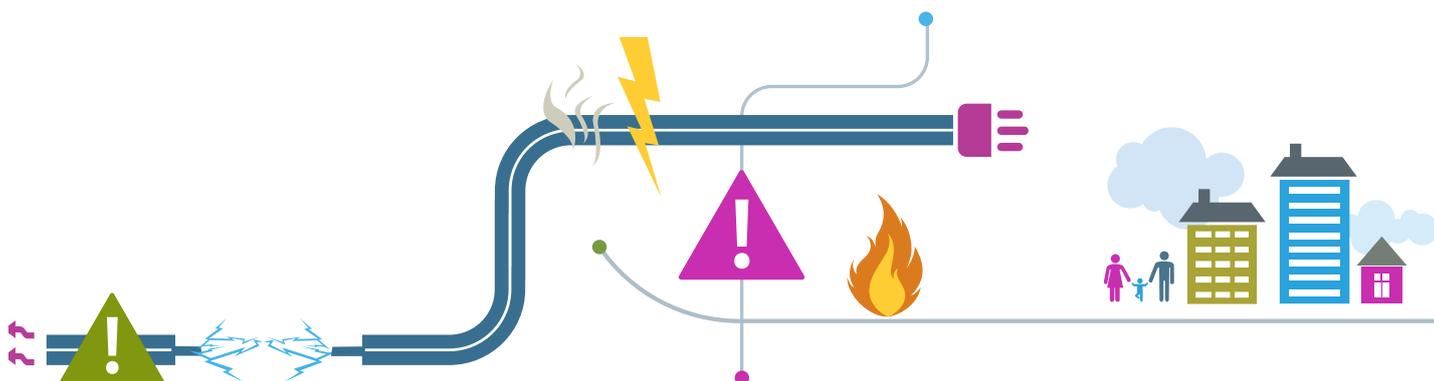
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INTUMESCENT AND ACOUSTIC PADS AND COVERS

1. Compliance and Legislation

Intumescent and acoustic pads and covers are designed for installations to achieve compliance with the following Building Regulations:

England & Wales

- The Building Regulations 2010
Approved Document B, Sections 5, 7 & 9
- Approved Document part B volume 1 (dwellinghouses)
2006 Edition incorporating 2010, 2016 and 2020 amendments - For use in Wales
- Approved document part B volume 2 (buildings other than dwellinghouses)
2006 Edition incorporating 2010, 2013, 2016, 2017 and 2020 amendments –
For use in Wales.

Scotland

- The Building (Scotland) Regulations 2004
Standard 2.2

Northern Ireland

- The Building Regulations (Northern Ireland) 2012
Regulations 33-37

Wiring Regulations

- BS 7671:2018 Amendment 2:2022 – Requirements for Electrical Installations
Regulation 134.1.1
Regulation 510.3
Regulation 530.4.2
Appendix 13 – Escape Routes and Fire Protection

2. Applications for use

Intumescent pads and covers are designed to provide a level of protection against the risk of fire spreading where penetrations are made in walls, partitions, or ceilings by the installation of electrical accessory mounting boxes or associated enclosures. Such penetrations can reduce the fire rating or integrity against the spread of fire.

Intumescent covers can also be applied to other electrical equipment such as downlights where their installation has also penetrated the ceiling.

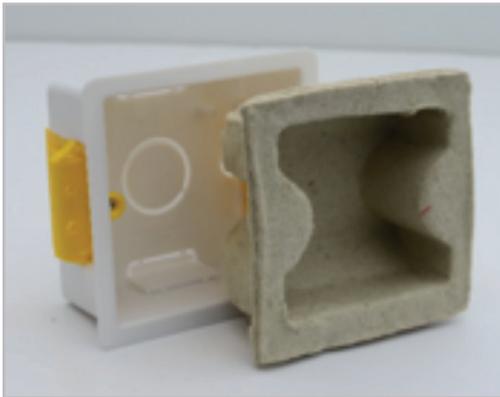
Acoustic pads and covers are similarly designed to limit the transmission of sound through walls and ceilings where these have been penetrated by the installation of accessory mounting boxes and enclosures.

3. Installation

Putty or pads are normally applied to the inside surfaces of accessory mounting boxes or enclosures:



Pads may be applied internally or externally as covers over the accessory mounting box or enclosure:



Intumescent pads are applied as adhesive pads to the inside surfaces of the mounting box:



These applications are widely promoted as being “best practice”.

4. Potential hazards

4.1 Thermal and Fire Risks

Electrical wiring accessories are tested when mounted on a British Standard wall box with no added firestop or acoustic materials. The introduction of these materials which have unspecified thermal properties is likely to result in increased temperature rise during operation.

Independent tests conducted on behalf of BEAMA indicate that the introduction of these materials can result in temperature rise beyond the permitted maximum. Wiring devices incorporating fuses or electronic devices such as USB chargers are at greatest risk.

Such overheating can lead to loss of function for accessories incorporating electronic devices, burn out of the device and damage to the associated wiring installation and ultimately present a fire risk.

4.2 Electric Shock Risks

Thermally damaged wiring accessories or wiring insulation may lead to exposed live parts with the associated risk of electric shock.

4.3 Installation problems

Internally installed intumescent and acoustic pads reduce the wiring space and safety clearance within the enclosures (also defined in their relevant product standards). This is particularly relevant in retrofit situations where the wall box is not changed when installing a new wiring accessory.

5. In Conclusion

Intumescent and acoustic pads and covers shall not be used unless approved by the manufacturer of the wiring accessory. Approval shall take into account the influences of the pad(s) and cover(s) upon the relevant requirements of the accessory product standards e.g., temperature rise and internal clearances.

Manufacturer's instructions shall always be taken into account.

REFERENCES

England & Wales:

[The Building Regulations 2010 - Legislation.gov.uk](#)

[Fire safety: Approved Document B](#)

[Building regulations: approved documents | GOV.WALES](#)

[Approved document part B volume 1 \(dwellinghouses\)](#)

[Approved document part B volume 2 \(buildings other than dwellinghouses\)](#)

Scotland:

[The Building \(Scotland\) Regulations 2004 - Legislation.gov.uk](#)

[Building standards technical handbook 2020: non-domestic](#)

[Building standards technical handbook 2020: domestic](#)

Northern Ireland:

[Regulations – Building Control NI](#)



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