

# What is the difference between an adhesive and a sealant?



Our customers often use adhesives and sealants in their products,

in a wide variety of applications. They can be seen as quite similar materials, and indeed have overlapping uses. Some [adhesives](#) are also used as a sealant; some [sealants](#) are also used as an adhesive. We even sell products which are termed "[adhesive sealants](#)". But they do serve distinct purposes.

**Adhesives** are materials designed for the bonding together of two or more substrates. The bonding may be permanent (for the lifetime of the product), or until no longer required (for example, an anaerobic adhesive used for thread locking). [Structural adhesives](#) typically have higher shear and tensile strengths. They have good cohesive strength – the internal strength of the adhesive material, or how well the adhesive can hold itself together under stress. A normal function of a structural adhesive is to facilitate load transfer and distribution within a bonded assembly, and to this end, adhesives are generally harder materials, with a lower elongation at break.

**Sealants**, in contrast, are used to fill spaces and create barriers, offering protection against the ingress of liquids, gases, and other environmental elements. Their defining trait is typically flexibility; they maintain their sealing capability even as the materials they are applied to expand, contract, or otherwise move. With flexibility may come an inherently lower cohesive strength, but higher elongation at break.

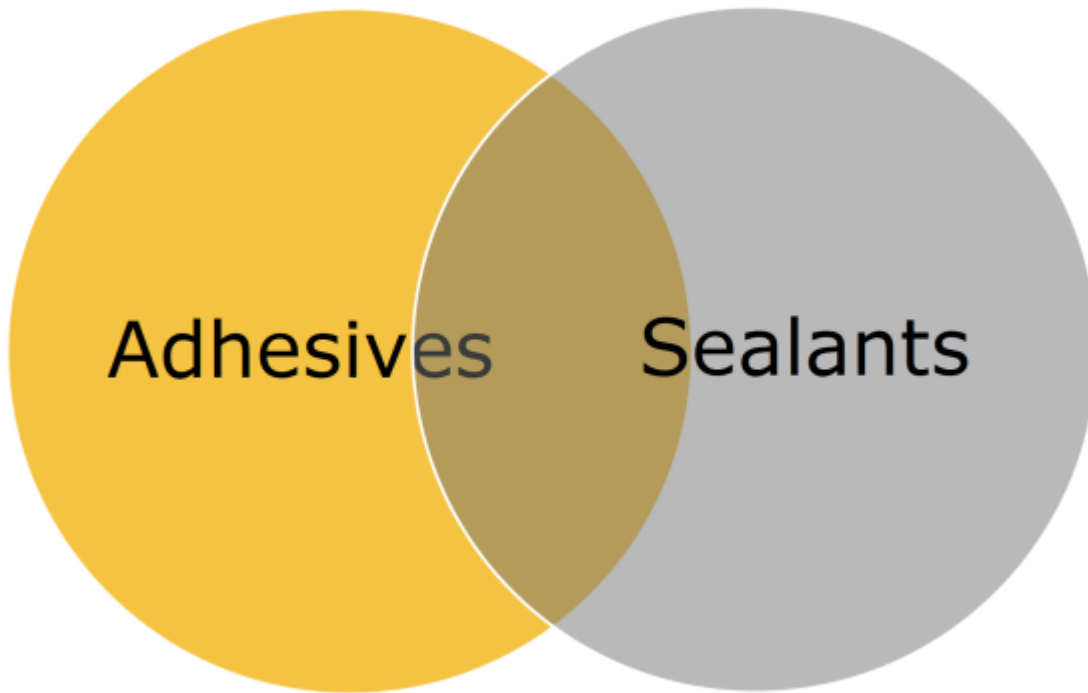
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Adhesives and sealants share some features:

- Adhesion – neither will function without adhering to the substrates
- Durability – both must maintain their adhesion through exposure to the environment, like temperature change, weather, solvents and so on
- Cure – they are usually liquid during application, wetting surfaces in order to get adhesion, and then “harden” or cure to get their physical properties

While adhesives and sealants can be similar in composition and are often used in tandem, they are engineered for different functions. Adhesives provide structural integrity through strong bonds, while sealants offer flexibility and environmental protection, filling gaps and sealing assemblies to prevent the penetration of external elements.

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Nevertheless, many applications may need the functionality of both an adhesive and a sealant. It may be that the adhesive chosen will have enough sealing capabilities to do that function as well, or vice versa. In some cases, it is possible that compromise between adhesive functionality and sealing functionality may be needed. Hardness, elongation, tensile strength, cohesive strength... If you need help with your choice for material evaluation for your next project, please [get in touch](#).

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Supplied by:



INTERTRONICS

12a Station Field Industrial Estate, Banbury Road, Kidlington

Oxfordshire England OX5 1JD

t 01865 842842 e [info@intertronics.co.uk](mailto:info@intertronics.co.uk)

Last updated: January 2024

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