

Bitumen is a form of waterproofing and road building material that has been utilised in some form since ancient times. At SOPREMA, they have developed bituminous solutions for over 100 years – designed to protect flat and pitched roofs, domed structures, terraces and court yards from rainfall. Despite an estimated 102 million tonnes of bitumen being used globally, the bitumen used in waterproofing is largely split between two types of ‘modified bitumen’: elastomeric SBS and plastomer APP.

### Modified bitumen

By adding other materials to the bitumen, manufacturers can create a longer-lasting, more durable product – giving it either plastic or rubber properties. Modifying bitumen gives it the ability to withstand a wide temperature range, and superior weather proofing.

### APP bitumen

**APP-modified bitumen** is a plastic bitumen blend, which is modified using plastic in the form of atactic polypropylene (APP). As installers begin to torch-apply APP, this type of plastic begins to melt at a point of 149C, where it melts into a liquid wax like substance which acts as an almost free-flowing liquid which can then be mopped across a surface. APP has a **high temperature tolerance** when heating, so is more user-friendly for installers.

This **ease of melting** makes APP bitumen popular on smaller roofs such as residential properties and commercial flat roofs.

### SBS bitumen

**SBS-Modified bitumen** consists of bitumen with a synthetic rubber modification, adding styrene-butadiene-styrene (SBS). This does not melt in the same way as APP, instead offering a ‘sticky’ melt which increases the hotter it gets. This lack of liquid flow means it takes less heat to install and allows a faster installation compared to APP. SBS systems can also be installed with cold adhesive on projects where open flames are not permitted.

Because of the rubber used in its construction, SBS-bitumen is **more flexible** when compared to the plastic used in APP. This flexibility means it has recovery properties, making it capable of withstanding stresses created by wind, temperature fluctuation and expansion and contraction.

As well as faster installation times, SBS bitumen is **not affected by oxidation or aging**.

### Which type of bitumen should roofers use?

Ultimately, deciding on the actual type of modified bitumen **depends on your project**. To reduce timescales or to avoid the use of open flames, SBS-Modified Bitumen gives roofers the versatility needed whilst retaining the same level of hardwearing weather-proofing. However, because APP bitumen is more forgiving to install under hot-melt conditions, it may be preferable. All Allnex SOPREMA bitumen systems are offered with industry-leading warranties, and support for all products is available.

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