

Gaskets

This Technical Note replaces CWCT TN 18. It describes the performance of gaskets and gives an approach to the design and selection of gaskets for glazing and other uses in the building envelopes.

This Technical Note should be read in conjunction with:

*TN 16 Joints in the building envelope
TN 17 Weathertightness and drainage*

Introduction

Gaskets are widely used to seal joints in building envelopes. Although they are apparently simple and inexpensive they are an important component in any system and they are a common cause of water and air leakage.

This Technical Note deals with the design of joints and gasket profiles and the selection of gaskets for use in different operating environments.

A gasket is a preformed component that provides a seal when compressed within a joint. The gasket may be compressed against a mating surface or another gasket.

Gaskets may be used to seal joints between fixed components (static gaskets) or to create opening joints around windows, doors and access openings (dynamic gaskets), Figure 1.

A range of polymeric materials are available for the manufacture of gaskets and gaskets are made in a wide range of profiles (cross-sections). Gasket design was seen as something of a 'black art' but the introduction of BS EN 12365 allows more of an engineered performance based approach to gasket design.

Gaskets should not be confused with sealing strips. These are preformed but

rely to some extent on adhesion to one or both of the faces they mate against.

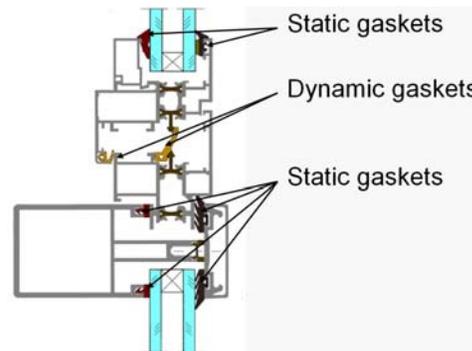


Figure 1 Static and dynamic gaskets

Nor should they be confused with sealant joints that are formed of a material that cures in the joint and relies on adhesion to both surfaces against which it mates. These are covered in CWCT TN 19 and TN 20.

Function of a gasket

Gaskets are primarily required to resist the passage of air or water or both through a joint. However there are other requirements that the gasket may have to meet. These include:

- Retention of components
- Transmission of forces such as wind load
- Low compression forces