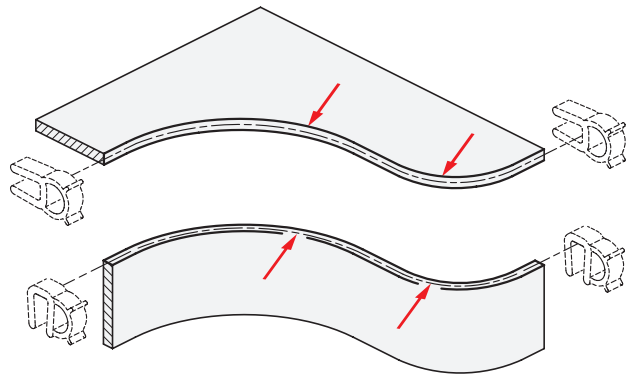
Minimum placement radii

In order to ensure a consistent seal for the profile and to prevent the profile from detaching, placement should not be set below the minimum radii. This also makes the profile assembly easier.

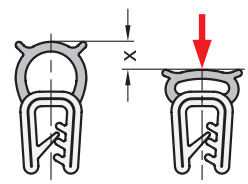
The radii are listed on the corresponding standard sheets and should be used as a guideline. Depending on the direction of application, a distinction is made between cut or curved radii, in other words, interior or exterior seal profiles.



Shaping

Ideally, edge protection seal profiles should maintain a deformation x of approximately 30 - 50% of the maximum value in order to ensure reliable sealing.

Deformation of over 50% can impair seal tightness and reduce the resilience of the sealing material due to plastic deformation.



Basic materials, characteristics

Profiles can be made from various basic materials depending on the application. The table to the right summarizes the general characteristics to facilitate the choice.

Due to the multitude of chemicals, solvents etc. exact specifications are not possible, as basic materials that are fundamentally unstable can be durable in combination with specific materials and vice versa. Concentration, temperature and exposure time also play a crucial role. The customer is advised to test resistance when combining respective materials in contact with one another.

Characteristics	PVC	NBR	EPDM
Operational temperature min.	-40 °C	- 30 °C	- 40 °C
Operational temperature max.	+70 °C	+100 °C	+100 °C
Abrasion resistance / Wear resistance	+	+	+
Deformation resistance	o	+	+
Resistant to: *			
• UV light / weather exposure	+	-	+
• Chemicals	+	-	+
• Oil, greases	o	+	-
• Fuels	o	+	-
• Acids	+	o	+
• Alkalines	o	+	+
• Solvents	o	o	o
• Alcohol	o	o	+

* + resistant, o conditionally resistant, – non-resistant

UL certification (Seal profiles as EPDM)

UL (Underwriters Laboratories) is an independent global company operating in safety science, similar to TÜV in Germany. Their testing is required as a priority in the US-American and Canadian market.

The GN 2180 edge protection seal profiles made of EPDM have a “UL-recognized component” mark. This states that the profiles can be used as components in finished products which are also intended for UL-certified use.

For customers and companies, the need for these types of certification is becoming increasingly important, as it guarantees high quality, reliable processing, and long durability, as well as reliable product safety.