



**Custom-made  
sealing profiles from  
in-house production**

# Sealing profiles by EMKA

---

Sealing technology is a core business of EMKA.

The company is an expert in extruding rubber and plastic profiles with its own production plants in Spain and England.

EMKA produces more than 1,500 seals and rubber profiles made of various materials as catalogue standard as well as countless individual customer solutions after detailed consultation with our sealing experts.

Loops and roll editing tape, stamped steel and reinforcements of textile fibres can be additionally incorporated. For subsequent processing we can also manufacture fixed lengths, rings and corner frames. The application of adhesive tape, lubricant varnish or flocking, as well as special special coatings for electro-magnetic compatibility (EMC seals) round off the range of services.

EMKA know-how guarantees top quality.





# Product range

---

## Edge protection profiles



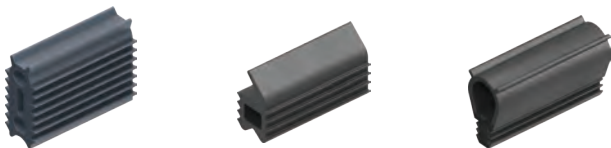
## Self-clamping sealing profiles



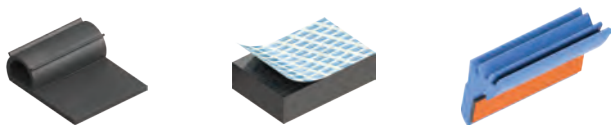
## Self-clamping sealing profiles made of fire protection material



## U-section profiles



## Profiles with adhesive area



## Clamping and holding profiles



# Materials

---

In addition to the base material, many characteristics influence the function and quality of the seal.

These include elasticity, residual compression and resistance to chemicals, heat and environmental influences.

EMKA mainly uses the materials EPDM, NBR and silicone.

The materials PVC, TPE and CR are also used.

## Characteristics of EPDM:

- Very good resistance to aging
- UV resistance
- Very good resistance to weathering
- Very good resistance to ozone
- Very good electrical insulation properties
- Resistant to alcohols and diluted acids (e.g. brake fluids)
- Application range -40° C to +100° C
- Special EPDM compounds also -50° C to +150° C with hot water and air

## Characteristics of NBR:

- Very good oil resistance
- Small compression set
- Good low temperature behaviour
- Typical application range -30° C and +100° C (with special compounds)
- Application in the food industry possible

## Characteristics of silicon:

- Good elasticity even at very low and high temperatures
- Application range between 60° C and +200° C
- Conditional resistance to oils
- Resistance to weathering
- Resistance to aging
- Resistance to ozone
- UV resistance
- Very well suited for medical components
- Colour fastness

# Processing options

---

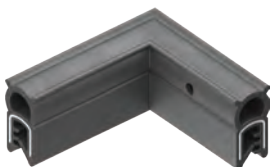
## Glueing

The most simple process is to glue two profile ends. For all rings, vent holes are strongly recommended as the compression force increases in a closed ring. A better solution to glueing two profiles is film vulcanisation.



## Film vulcanising

Film vulcanising is a permanent and durable process. A foil of the same material is inserted between the profile ends that are to be vulcanised. The required time for film vulcanising is longer than for glueing.



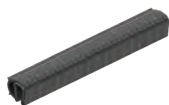
## Injection moulding

Injection moulding means formed corners and end injection moulding. Injection molding is e.g. a process to produce special corners for frame. The example next shows ① a rounded frame. While the clamping range ② is produced rectangular. This option is not possible for vulcanising profile ends with mitre joint ①.



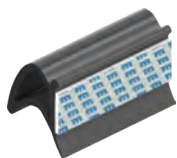
## Cutting to length

Upon customer request, profiles can be cut and packed online - i.e. in the running production line - or subsequently to lengths between 5 - 500 cm. Angled cuts, mitre cuts and notches are also possible.



## Application of adhesive tape

The toolless mounting by gluing sealing profiles is used for more and more applications. Joining very different materials as well as low-stress bonding by means of large-area glued joints are major advantages here. Double-sided adhesive tapes can be applied subsequently for the respective application.



## Coating

The natural, high friction coefficients of an elastomer can be significantly reduced with a bonded coating. This operation can be carried out online - in the running production line - or subsequently, for example after corner vulcanization. The coating is transparent and therefore hardly visible.



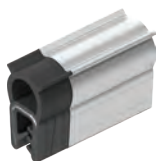
## Flocking

The flock fibres reduce the coefficients of friction, which are very high in rubber, and can compensate for small irregularities and tolerances. Typical applications are, for example, window seals in automotive engineering. Depending on the application, the flocking may wear off. Profile flocking changes the optical and haptic characteristics.



## Sheathing / EMC sealing

A conductive foil is wrapped around the rubber profile and firmly bonded to the surface. The conductive connection of frame and door reduces electromagnetic interference. The attainable shielding effectiveness depends on numerous influencing factors.



# EMKA Sealing Systems

Arnedo (La Rioja), Spain

---

- Certified according to ISO 9001, ISO 14001, IATF 16949
- Production area 12,000 m<sup>2</sup>
- Processing of: EPDM, CR, NBR, thermoplastics
- 1 salt bath extrusion line
- 3 UHF extrusion lines, 2 PVC, 1 TPE
- 5 components extrudable
- Cutting and punching machines for precise lengths
- Injection presses for mould corners
- Film vulcanisation for corners and rings
- SK film laminator



Arnedo (La Rioja), Spain



Rubber extrusion lines with salt bath and UHF vulcanisation



Cleaning and cooling line



Birmingham, England



Film vulcanisation for rings and frames



Adhesive tape laminating machine

## EMKA Profiles

Birmingham, England

- Certified according to ISO 9001
- Production area 4,500 m<sup>2</sup>
- Processing of: EPDM, CR, NBR
- 3 salt bath extrusion lines
- 2 components extrudable
- Cutting and punching machines for precise lengths
- Injection presses for mould corners
- Film vulcanisation for corners and rings
- SK film laminator



[www.EMKA.com](http://www.EMKA.com)

EMKA Beschlagteile GmbH & Co. KG  
Phone: +49/2051/273-0  
42551 Velbert, Germany  
[info@emka.com](mailto:info@emka.com)