



# Product Application Guide

## EPDM 80 for R744 Applications

### Application

Sealing of CO<sub>2</sub> circuits in the automotive HVAC is challenging because of:

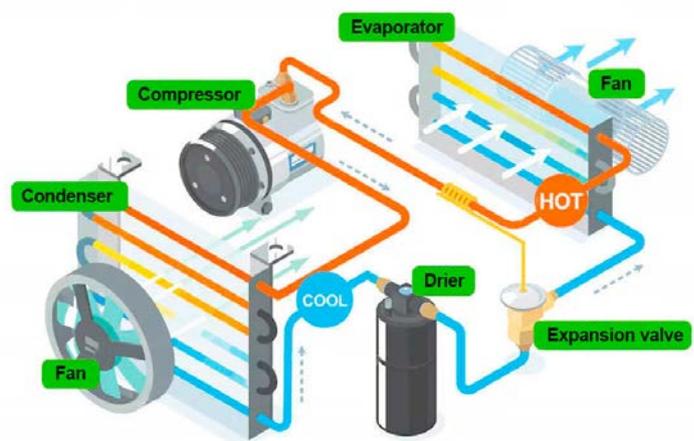
- RGD effects to consider
- R744 testing required
- Higher temperatures than for normal EPDMs

### Our Added Values

- RGD tested in CO<sub>2</sub>
- PFAS free coating
- FEM simulation of the sealing solution
- Quick prototyping
- Full engineering support
- IATF 16949:2016 certified incl. product development

### Product Description

As a dedicated sealing material for O-Rings and sealings, this EPDM 80, EBO80ST6 comes as a PFAS free solution for R744 circuits in the automotive sector.



### Sealing Your Success

**Disclaimer:** In general, the enclosed information, recommendations or advice are given in a good faith. GITIS srl gives no warranty that the same results can be obtained in other laboratories using different condition of preparation and evaluation of the samples. Rev. 01 - 09.04.2024





# COMPOUND TEST REPORT

<b>Material code:</b>	EB080ST6		<b>Date of issue:</b>	12/03/2025					
<b>Material description:</b>	EPDM 80 Black -40/165 °C		<b>Revision:</b>	1					
MECHANICAL AND PHYSICAL PROPERTIES			Standard	Unit	Actual values				
					Min	Max	Min	Max	Value*
	Colour				Black				Black
	Density	ISO 1183-1 A	g/cm3						1,17
	Hardness	ISO 48-4	ShA	75	85				83
	Tensile strength	ISO 37-2	MPa						18
	Elongation at break	ISO 37-2	%						244
	TR10	ASTM D 1329	°C						-44
	C set def. 24h 165°C	ISO 815-1	%						24
*mean value/median value according to the stated standard									
AGING TEST									
Air 94 h 165°C ISO 188	Δ Hardness		Points						3,9
	Δ Tensile strength		%						-12
	Δ Elongation at break		%						-25
	Δ Volume		%						-0,3
Air 24 h 180°C ISO 188	Δ Hardness		Points						1,5
	Δ Tensile strength		%						-7
	Δ Elongation at break		%						2,5
	Δ Volume		%						0,7
CO2 24 h 23 °C (P: 40 bar) ISO 1817	Visual inspection surface and cross section								no cracks
	Δ Volume		%						4
RGD test CO2 24 h 23 °C (P: 40 bar) on oring 12,42x1,78 ISO 1817 (Results measured within 10 minutes after pressure release)	Visual inspection surface and cross section								no cracks

Sealing Your Success



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