

GAS-INSULATED SWITCHGEAR SEALING MATERIALS

EPDM, CR, AND CIIR FOR STATIC N₂ AND SF₆ APPLICATIONS

Freudenberg Sealing Technologies combines material and product know-how to provide the best solutions for static flange sealing against insulating gas in MV/HV switchgear.

Standard EPDM and CR materials with excellent permeation characteristic and SF₆ durability are ready for serial production and available in a variety of o-ring dimensions.

Improved EPDM and CIIR materials from the development pipeline will even exceed the current materials with lower permeation rates and will be ready for new gases like “g³” (“Green Gas for Grid”).

VALUES FOR THE CUSTOMER

- Large temperature durability range from –55 °C to +150 °C
- Low gas permeability
- High ohmic resistance to ensure safe electrical operations
- Sealing pressure up to 30 bar
- High variety of dimensions available

Material Property	Freudenberg Sealing Technologies Compound							
	EPDM						CR	CIIR
Base Material	EPDM						CR	CIIR
Compound No.	280	281	282	126219	233479	235913	233906	New *
Hardness, Shore A	60	70	85	70	70	75	70	70
Temperature Range	–50 °C to +150 °C	–50 °C to +150 °C	–50 °C to +150 °C	–50 °C to +150 °C	–55 °C to +150 °C	–50 °C to +140 °C	–35 °C to +100 °C	–50 °C to +130 °C
Color	black	black	black	gray	black	black	black	black
Permeation	+	+	+	+	+	++	++	+++
Conductivity	statically deducing	statically deducing	statically deducing	isolating	statically deducing	statically deducing	statically deducing	statically deducing
SF ₆ decomposition products resistance	+	+	+	+	+	+	+	+
Assembly grease resistance	PAG/Silicone	PAG/Silicone	PAG/Silicone	PAG/Silicone	PAG/Silicone	PAG/Silicone	Hydrocarbon PAG/Silicone	PAG/Silicone

* Serial release to be expected in 2016

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