

DAI-EL® G-EXP-045

Characteristics

DAI-EL® G-EXP-045 is a cure incorporated terpolymer with medium Mooney viscosity. It is designed for compression molding of O-rings, seals, and other parts where exceptional fluid resistance and low compression set are required.

Properties*	Value
Fluorine content	70%
Specific gravity	1.90
Mooney viscosity (ML1+10@121°C)	40
Color	White to cream
Solubility	Soluble in lower ketones and esters

*Typical properties are not suitable for specification purposes.

Typical Applications

O-rings, seals, gaskets, molded tubing

Form & Packaging

DAI-EL® G-EXP-045 is packaged as slabs with polyethylene film separators in a polyethylene bag. The standard shipping container is a 20 kg (44 lb) net weight carton.

Safety

- (1) Store and use all fluoroelastomers in a well-ventilated area.
- (2) Do not smoke in areas contaminated with dust from fluoroelastomers.
- (3) Avoid eye contact.
- (4) After handling, wash any skin that came in contact with the product with soap & water.

Potential hazards, including evolution of toxic vapors, exist during compounding or processing under high temperatures. Before processing Daikin fluoroelastomer, consult the SDS (Safety Data Sheet) and follow all label directions and handling precautions. Read and follow all directions from other compound ingredient suppliers. Mixing agents that contain metallic particulate such as powdered aluminum can rapidly decompose at high temperatures, and therefore should not be used with this product.

Typical Compound Properties

Test Formula	phr
DAI-EL® G-EXP-045	100
MT Carbon Black (N-990)	30
Magnesium oxide	3
Calcium hydroxide	6

Properties	MDR 2000
Temperature: 177°C Frequency: 100 cpm	Strain: 0.5° Test time: 6 min
ML (minimum torque), lb-in (dNm)	1.2 (1.3)
MH (maximum torque), lb-in (dNm)	19.3 (21.7)
ts2 (scorch time), minutes	1.1
t'50 (time to 90% cure), minutes	1.5
t'90 (time to 90% cure), minutes	2.4

Physical Properties	
Press Cure	10 min at 177 °C
Post Cure	24 hrs @ 232 °C
Hardness, Shore A	79
Tensile strength, MPa (psi)	12.8 (1860)
Elongation at break, %	250
100% Modulus, MPa (psi)	5.4 (780)
Compression Set, ASTM D395 Method B (#214 O-ring)	
70 hours @ 200 °C, %	19

Heat Aging Properties, 70 hrs @ 250°C	
Change in Hardness, pts. Shore A	0
Change in Tensile strength, %	-3
Change in Elongation, at break, %	+4
Change in 100% Modulus, %	-10

Fuel CM20 (20% Methanol), 70 hrs @ 23°C

Change in Hardness, pts. Shore A	-5
Change in Tensile strength, %	-21
Change in Elongation at break, %	+2
Change in 100% Modulus, %	-26
Change in Volume, %	+4.5

Low Temperature Retraction, ASTM D1329

TR10, °C	-9
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