

DAI-EL® G-101

Characteristics

DAI-EL® G-101 is an ultra low molecular weight fluoroelastomer. At room temperature it is an opaque paste. At temperatures above 70°C (158 °F) it becomes a transparent, viscous fluid. DAI-EL® G-101 is not crosslinkable but is used as a plasticizer in other fluoroelastomers.

Properties*	Value
Number of average molecular weight	Approx. 3,000
Specific gravity	1.76 ~ 1.77
Refractive index	1.37
Viscosity (at 60°C) (poise)	500
Specific heat (at 80°C)	0.36
Vaporization rate (2 h at 200°C) (%)	Approx. 2
Volume resistivity (Ω-cm)	1.8 x 10 ¹²
Dielectric constant at 102 Hz at 105 Hz	2.6 x 10 ⁻³ 8.0 x 10 ⁻²
Typical Application	Additive for other DAI-EL® fluoroelastomers
Packaging & Units	5kg can

*Typical properties are not suitable for specification purposes.

Precautions in handling

Store and use all fluoroelastomers only in a well-ventilated area

Do not smoke in areas contaminated with dust from fluoroelastomers.

Avoid eye contact.

After handling fluoroelastomers wash any skin that came in contact with the product with soap and water.

Potential hazards, including evolution of toxic vapors, do exist during compounding or processing under high temperature conditions. Before processing Daikin fluoroelastomers, consult the SDS (Safety Data Sheet) and follow all label directions and handling precautions. You need to read and follow all directions from other compound ingredient suppliers.

Also, mixing agents that contain metallic particulate such as powdered aluminum can rapidly decompose at high temperature, therefore do not use metallic particulate as mixing agent.

Physical Properties of DAI-EL® G-101 Compounds

Solid Type DAI-EL®	Amount of G-101 Added (PHR)	Curastometer Index*	
		ML	ΔM
G-701*	0	0.19	2.77
	33	0.04	0.96
G-702*	0	0.24	2.30
	15	0.13	1.19
G-704*	0	0.10	2.35
	20	0.03	1.26

Torque = curastometer index x 13.5 (kgf-cm)

Physical Properties (Original)

Solid Type DAI-EL®	G-101 Added (PHR)	Hardness JIS A	100% Modulus (MPa)	Tensile Strength (MPa)	Elongation (%)
G-701*	0	66	1.8	11.8	280
	33	56	0.6	8.3	370
G-702*	0	62	1.2	8.4	400
	15	52	0.9	7.7	510
G-704*	0	61	1.4	10.3	290
	20	55	0.9	7.8	370

Change in Properties After Air Aging

Solid Type DAI-EL®	G-101 Added (PHR)	Hardness Change (point)	Tensile Strength Change (%)	Elongation Change (%)
G-701*	0	0	-25	+7
	33	+1	-32	+4
G-702*	0	+4	-31	+20
	15	+2	-20	+43
G-704**	0	+3	+5	+3
	20	+3	+12	+3

*Air aged 72 h at 275°C (527°F)

**Air aged 24 h at 230°C (446°F)

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Compounds and Cure Conditions

Compound (phr)	G-701	G-702	G-704
Raw rubber (DAI-EL®)	100	100	100
Magnesium oxide	3	3	3
Calcium hydroxide	6	6	6
Cure conditions			
Press cure	20 min at 150°C (302°F)	30 min at 150°C (302°F)	10 min at 170°C (302°F)
Oven cure	24 hrs at 200°C (392°F)	24 hrs at 200°C (392°F)	24 hrs at 200°C (392°F)

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