

# NEVSi™ LSR FC140

## Liquid Silicone Rubber for Fuel Cell Sealing Applications

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**NEVSi LSR FC140** is a two-component liquid silicone rubber for both injection molding or casting in a variety of sealing focused around fuel cell sealing. It has been specifically formulated for sealing applications requiring a low viscosity, low compression set and good mechanical properties. The technology has been developed with the stability and functionality to provide stable sealing properties at low and high temperatures common to fuel cell sealing applications. Silicone gaskets are chemically inert, meaning their properties remain stable and do not negatively impact the fuel cell performance in initial set-up and functional operation.

**NEVSi LSR FC140** has been specifically developed for bipolar plate (BPP) and membrane electrode assembly (MEA) sealing applications. The technology possesses a low viscosity which allows decreased injection pressure and, therefore, protection of the substrates during manufacturing. The **NEVSi LSR FC140** offers significant advantages over room temperature vulcanizate (RTV) technologies utilized in this application space due to the increased cure speed, injection moldability and superior compression set characteristics.

### KEY FEATURES

- Non post-cure
- Low viscosity
- High reactivity
- Low compression set (non post-cure)
- Long pot life at ambient temperature
- Excellent thermal resistance
- Excellent degradation resistance
- Good media resistance

### APPLICATIONS

- Fuel Cell sealing applications
- Bipolar plate (BPP) sealing
- Membrane Electrode assembly (MEA) sealing

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### PROPERTY DATA

Testing Items	Standard	Unit	Typical Data
<b>Basic Property</b>			
		PART A	PART B
Appearance		Translucent	Translucent
Viscosity in Pa·s $\gamma = 10 \text{ s}^{-1}$ at 20°C	DIN 53018	60	70
<b>Typical Properties of Vulcanization</b> (Mix ratio of components A:B-1:1, Press cured for 10 minutes @ 175°C) The pot life of the mixture of the two components (closed vessel) at 20°C is three days, increased temperatures reduce pot life.			
Specific Gravity	g/cm <sup>3</sup>	DIN 53 479 A	1.08
Shore A Hardness	Durometer	DIN 53 505	40
Tensile Strength	MPa	DIN 53 504 S2	5.5
Elongation @ Break	%	DIN 53 504 S2	350
Tear Strength	N/mm	ASTM D 624-B	24
Compression Set*	%	DIN ISO 815	6.5

\* 22 hours @ 120°C

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials Commercial Office.

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### HANDLING AND SAFETY

- Wear eye protection and protective gloves when handling this product.
- Cure only where appropriate ventilation systems exist.

### STORAGE

- Store in a cool and dry place out of direct sunlight.
- Keep out of the reach of children.

### PACKAGE

Both 40kg pail kits and 400kg drum kits are available.

NEVSi LSR FC140  
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### FOR INDUSTRIAL USE ONLY

It is the responsibility of the user to determine the suitability of any Momentive Silicones product for any intended application. NEVER USE ANY Momentive SILICONES PRODUCT FOR IMPLANTATION OR INJECTION INTO THE HUMAN BODY. Specifications are available by contacting Momentive Performance Materials. Typical property data values should not be used as specifications. In as much as Momentive Performance Materials, Inc. has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the suitability of the material for his own particular use. Statements concerning possible or suggested uses of the materials described herein are not to be construed as constituting a license under any Momentive Performance Materials patent covering use or as recommendations for use of such materials in the infringement of any patent. Material Safety Data Sheets are available upon request from Momentive Performance Materials. The contents of this catalog are subject to change without notice. No part of this data may be reproduced without the prior approval of Momentive Performance Materials.

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