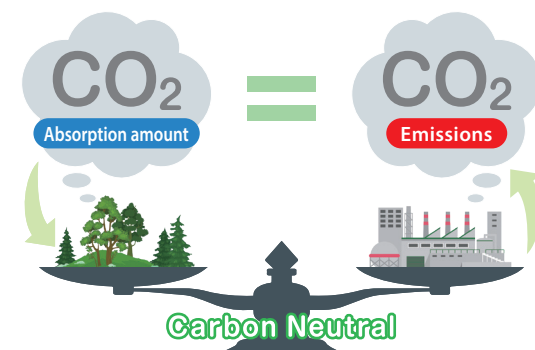


# Shin-Etsu Green Silicones™

## What is Carbon Neutral?

The goal of becoming carbon neutral is to balance the emissions of greenhouse gases such as CO<sub>2</sub> (carbon dioxide) which cause global warming, with the amount absorbed by plants, etc., to reduce emissions to zero. Low carbonization is progressing in all industries and Shin-Etsu is also working to reduce CO<sub>2</sub> emissions by using greener raw material and energy sources.



## What is Scope 3 Category 1?

In order to reduce greenhouse gas emissions, companies are being asked to reduce emissions not only from their own activities but also throughout their entire supply chain, from upstream activities such as raw materials to downstream activities such as use and disposal. Greenhouse gas emissions in the supply chain of business activities are classified as follows (Scope 1, 2, 3).

**Scope 1** Direct emissions from energy consumption within the company

**Scope 2** Electricity and heat bought by companies Indirect emissions from energy

**Scope 3** Indirect emissions occurring outside of Scope 2 (emissions by other companies related to business activities)

Scope 3 is further divided into 15 categories, with Category 1 being emissions related to purchased products and services. The Shin-Etsu Green Silicone (SESG) Series contribute to reducing Scope 3 Category 1 Greenhouse gas emissions in customers' supply chain.

## Shin-Etsu Green Silicones (SEGS) Series

These silicone products contribute to carbon neutrality (CN). Production has begun in Thailand, and metal silicon, which reduces CO<sub>2</sub> emissions, is used as the siloxane raw material. Energy-saving measures have been implemented through various production process improvements, and emissions have been reduced throughout the supply chain. Residual emissions are covered by certified carbon credits. These products have undergone validation of their product carbon footprint (CFP) based on ISO 14067 and have been certified as carbon neutral by the public organization Thailand Greenhouse Gas Management Organization (TGO).

### Features

- This is a carbon-neutral product that also utilizes carbon credits from Thailand's voluntary emissions reduction system, T-VER.
- This product is TGO Certified

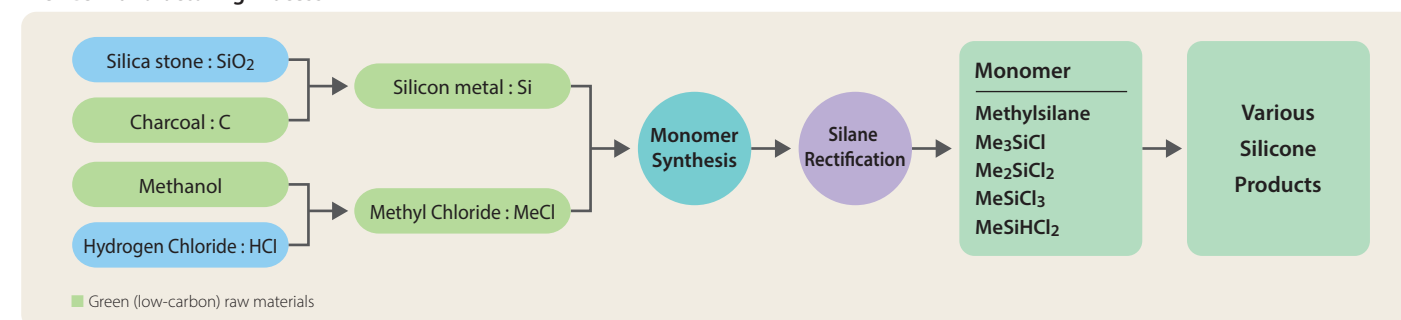
### Thailand's carbon credit system T-VER and CN certification

- T-VER (Thailand Voluntary Emission Reduction Program) is a carbon credit system in Thailand that has been in operation since 2014 by the Thailand Greenhouse Gas Management Organization (TGO), a public institution under the Ministry of Natural Resources and Environment.
- CN Certification is a program run by TGO that certifies offsets using TGO carbon credits. CN Certification is awarded when 100% of emissions are offset.



TGO Certificate  
TGO Certified products come with a certificate of CO<sub>2</sub> emissions

### SEGS Manufacturing Process



## Shin-Etsu Green Silicones Products

### Fluid Products

Product Name	Volatile silicone fluid KF-995-SEGS	Silicone fluid KF-96-SEGS-350cs	Silicone fluid for cosmetics KF-6017-SEGS
Parameter			
Appearance	Colorless transparent liquid	Colorless transparent liquid	Colorless transparent liquid
Kinetic viscosity 25°C mm <sup>2</sup> /s	4.0	350	600
Specific gravity 25°C	0.956	0.970	1.007
Volatile matter content 150°C/24 h %	b.p.210°C	0.5 or less	—
Refractive index 25°C	1.396	1.403	1.420
Melting point °C	−40	—	—
Pour point °C	—	−50 or less	—
Flash point °C	77	315 or more	240
Surface tension 25°C mN/m	17.8	21.1	—

(Not standard values)

### Elastomer Products

Product Name	Silicone Sealant SEALANT-N-SEGS	Silicone Sealant SEALANT-4588T-SEGS
Parameter		
Before Curing	Appearance	Paste
	Liquidity	None
	Tack-free time 23°C/50% RH min	5
After Curing*	Appearance	Rubber elastic body
	Density at 23°C g/cm <sup>3</sup>	1.04
	Hardness Durometer A	19
	Elongation at break %	630
	Tensile strength MPa	1.4
Color	White, Clear, Black Light gray, Gray	White, Clear, Light gray

\* After 7 days at 23°C/50% RH. Test results according to JIS K6240

(Not standard values)



### ISO 14067 Certificate

ISO 14067 is an international standard for calculating the carbon footprint of products. By undergoing verification by an independent third-party organization, we are able to provide objective and reliable information.

For product inquiries and consultations,  
please contact:

**Silicone  
Division**

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TEL.+81-3-6812-2406

● Silicone Division Inquiry Form: <https://www.shinetsusilicone-global.com/showInquiry.do>

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TEL.+81-3-6812-2411

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