NEWS RELEASE

Shin-Etsu Chemical Develops Industry-First Heat-Shrinkable Silicone Rubber Tubing for Busbar Covering

2024-09-11

TOKYO--(BUSINESS WIRE)-- Shin-Etsu Chemical Co., Ltd. (TOKYO: 4063) (Head Office: Tokyo; President: Yasuhiko Saitoh; hereinafter, “Shin-Etsu Chemical”) developed the ST-OR Type heat-shrinkable silicone rubber tubing for busbar covering for the first time in the industry * .

A busbar is a conductive metallic strip, typically made of copper or aluminum, and is used for power connection or distribution. Busbars have found wide-ranging applications and grown in demand for use not only in switchboards and control panels but also in electric vehicles (EVs) and hybrid vehicles (HEVs) more recently.

For being subjected to high currents and high voltages, busbars are protected with tape, tubing, or other insulating parts. In particular, busbars used in EVs and HEVs must endure even higher voltages and currents and thus require insulating parts that provide more advanced properties, including superior electrical insulation and heat resistance. The ST-OR Type heat-shrinkable silicone rubber tubing for busbar covering, which Shin-Etsu Chemical has just developed, is a new product meeting these requirements. The major features of the product are as follows:

1. High electrical insulating properties inherent in silicone (dielectric strength: 28 kV/mm)
2. Outstanding heat and cold resistance, allowing stable performance even in the harshest conditions (operating temperature range: −40°C to +200°C)
3. Bright orange on the outer surface, making the product suitable for insulative covering of busbars, which can be used as an alternative to high-voltage cables
4. Retention of flexibility typical of silicone rubber even after heat shrinking
5. Availability of ST-TC-1 Type for t hermal interface applications, which excels in both thermal conductivity (1.0 W/m·K)

and electrical insulation, making it suitable for covering a heating part to transfer heat to the casing
As our heat-shrinkable silicone rubber tubing easily shrinks when heated, one can achieve silicone rubber covering with outstanding electrical insulation and heat resistance simply by covering an object with the tubing and heating it. Using this tubing for insulative covering of busbars will contribute to higher reliability of power distribution systems and savings in labor and time in busbar production processes.

By developing and suppling high-value-added silicone products based on its accumulated technological capabilities and know-how, Shin-Etsu Chemical helps customers solve their problems and contributes to the realization of a sustainable society.

* Based on our research (as of the end of August 2024)

For inquiries about this matter, please contact:

Shin-Etsu Chemical Co., Ltd.
Public Relations Dept.
Tetsuya Koishikawa
Tel: 03-6812-2340, or from outside Japan: 81-3-6812-2340
Fax: 03-6812-2341, or from outside Japan: 81-3-6812-2341
E-mail: **sec-pr@shinetsu.jp**
www.shinetsu.co.jp

Source: Shin-Etsu Chemical Co., Ltd.