



Sumitomo Riko in response to CASE needs

▶Japanese



Connected (C)

Traffic control system,
communications
equipment develop



Suggestion

- ① Film decoration ornament

Autonomous (A)

Driver state distinction,
the living in the compartment

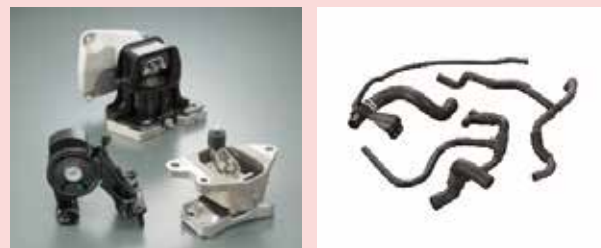


Suggestion

- ② Driver Monitoring System
- ③ Compartment Space Device

Shared (S)

Use of unspecified,
flying range increase

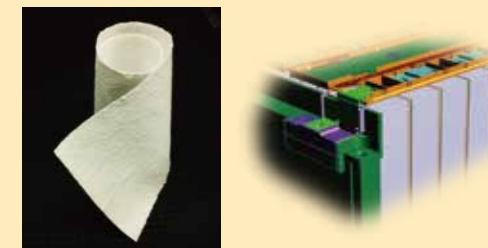


Suggestion

High reliability to be worthy of one flying range
(existing business domain)

Electric (E)

Substitution to parts to
motorize, commoditizing



Suggestion

- ④ High Performance Heat Insulation 「Finesulight™」
- ⑤ Heat Insulation for Battery Cell

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SUMITOMO
ELECTRIC
GROUP



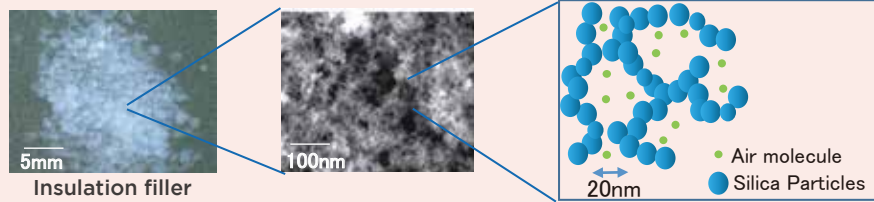
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High Performance Heat Insulation 「Finesulight™」

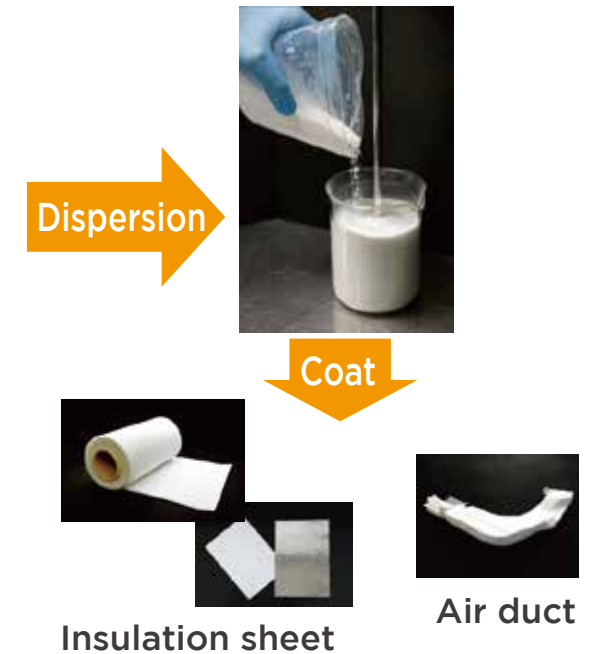


Description

Sumitomo Riko have developed a high performance heat insulation that is very thin and flexible. By applying to interior items, this heat insulator can reduce heat transfer in and out of a vehicle, thus contributing to improving both fuel efficiency and comfortability.

	Heat Insulator
	Utilizing composition technology, form a paint coating with insulation filler
Structure	
Cavity Diameter	50nm (i/e prevent convective heat transfer)
Heat conductivity	0.020W/mK (Paint film) Lower heat conductivity than air

Can be applied in limited space



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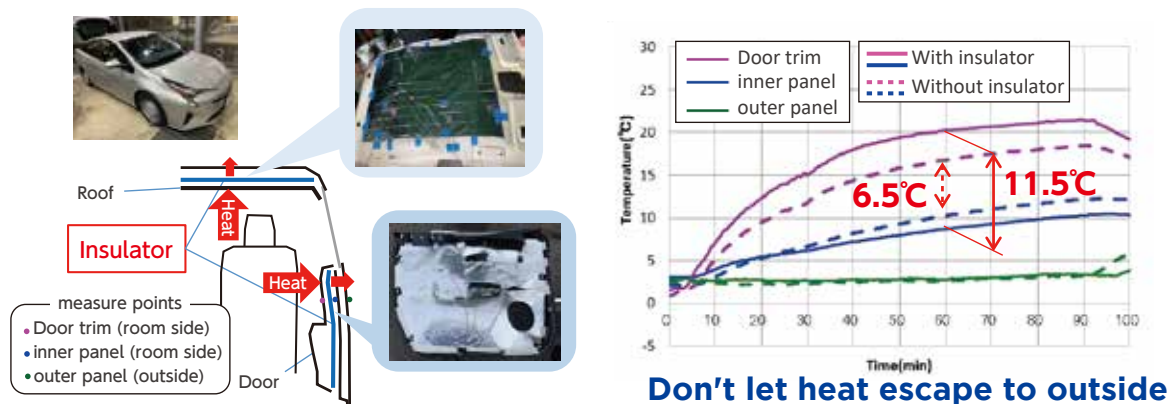
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High Performance Heat Insulation 「Finesulight™」

Characteristics

Heat insulation vehicle test

Measured temperature change with and without insulation.
(Condition: outside temperature 0°C/heater usage)



Simulation result

3.6% Reduction of heater work load

10.0% Reduction of heat loss from roof, door, and windshield.

2% improvement of electricity efficiency

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Application



- Interior parts ,air conditioning parts and battery parts for automobiles
- Home appliances, Electronic components
- Cool box, Insulation box
- Residential use

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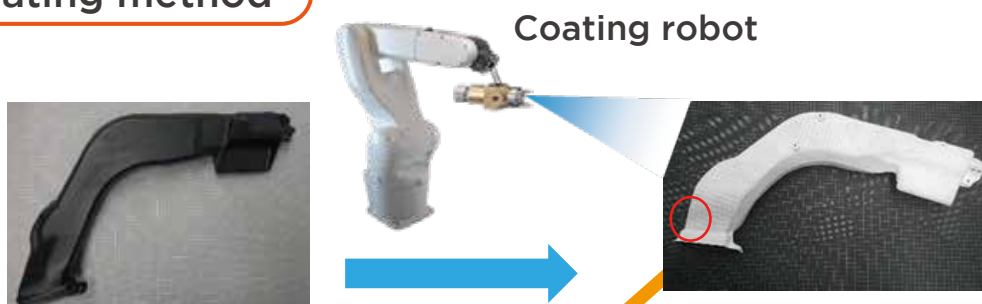


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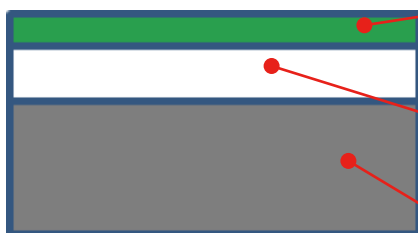
High Performance Heat Insulation 「Finesulight™」

Characteristics

Spray coating method



Sectional view



Top coat layer
Role: Insulation layer protection
Thickness: 60Qm

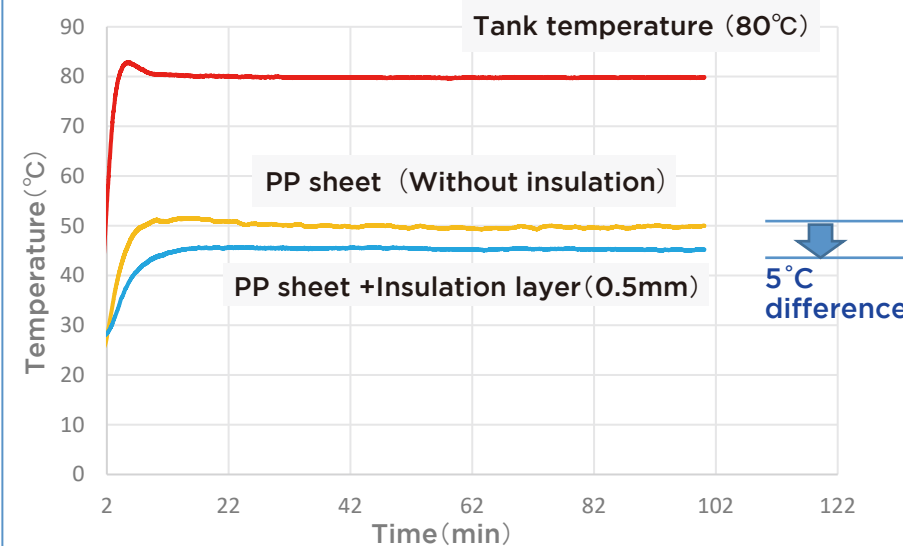
Insulation layer
Insulation filler coating
Thickness : 0.5mm

Base material (PP)
※Other materials are possible

Can be coated in complex shapes



Insulation performance test



Insulation effect when heated to 80 °C

Insulation coating layer (0.5mm)
has the effect of reducing 5 °C.

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