

Anti-squeak agent

# MODIPER<sup>®</sup> AS155



## 1 About MODIPER<sup>®</sup> AS155

- **MODIPER<sup>®</sup> AS155** is a high-molecular type additive developed by our graft polymer manufacturing technology.
- **MODIPER<sup>®</sup> AS155** can reduce squeak noise between 'Acrylonitrile-butadiene-styrene copolymer (ABS)' against each other, or 'Polycarbonate (PC) /ABS alloy (PC/ABS)' against each other, also between resin part and **LEATHER** when added into the resin.
- **MODIPER<sup>®</sup> AS155** can work as Anti-squeak agent even added into materials **AT THE PRESS (DRYBLEND)**.
- **MODIPER<sup>®</sup> AS155** is not made up of materials which are related to halogenated reactants.



Fig.1 Appearance of MODIPER<sup>®</sup> AS155

## 2 Concept of anti-squeak property about MODIPER<sup>®</sup> AS155

In case of resin without **MODIPER<sup>®</sup> AS155**, squeak problem occurs because there is no lubricity between resin and counter material. However, in case of resin with **MODIPER<sup>®</sup> AS155**, the squeak problem can be eliminated due to the lubricant layer which is made by **MODIPER<sup>®</sup> AS155**.

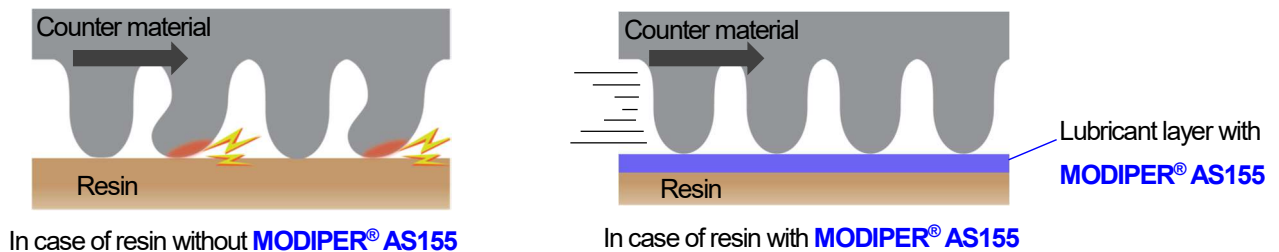


Fig. 2 Concept of anti-squeak property

## 3 Anti-squeak property of MODIPER<sup>®</sup> AS155

Anti-squeak properties of **MODIPER<sup>®</sup> AS155** are shown below with the Stick-Slip test data between PC/ABS against each other, also between PC/ABS and PVC leather. **MODIPER<sup>®</sup> AS155** can show excellent anti-squeak property with adding condition not only at compounding step but also at the press.

- Evaluation method : Stick-Slip test (VDA230-206: German Association of the Automotive industry)

The two specimens are prepared and rubbed 3 times. The risk of squeak noise is evaluated by Risk-Priority-Number (RPN) with the 10 stages.

(In case of RPN=1~3, it is categorized as No stick-slip risk).

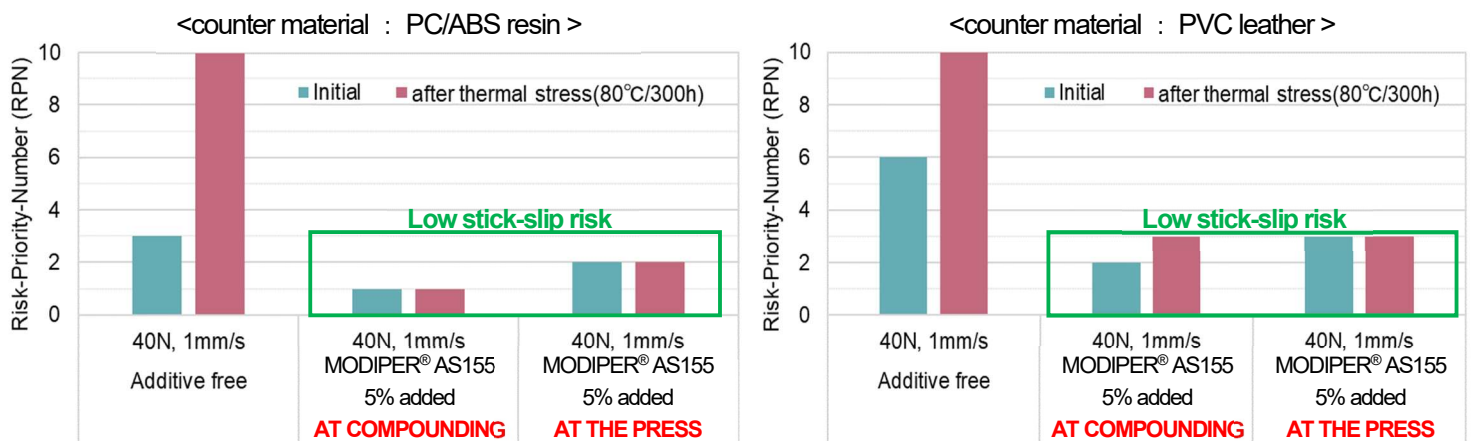


Fig. 3 Evaluation of squeak noise on PC/ABS material by stick-slip test (counter material : PC/ABS resin or PVC leather (by Shinco Inc.))

## 4 Basic physical properties of MODIPER® AS155

Basic physical properties of **MODIPER® AS155** are shown below (Table 1).

Table 1 Basic physical properties of **MODIPER® AS155** (representative data)

Product name	Shape	Color	Thermal property	
			1% weight loss temperature	5% weight loss temperature
			°C	°C
<b>MODIPER® AS155</b>	Pellet	Milky White	378	409

1) Thermogravimetric Analysis [Rate of temperature rise:10 °C /min. Atmosphere : Nitrogen]

## 5 Registration of MODIPER® AS155 for chemical regulation

Registrations of **MODIPER® AS155** are shown below (Table 2).

Table 2 Registrations of **MODIPER® AS155** <sup>1)</sup>

Japan	EU	USA	China	Taiwan	Korea
ENCS	REACH	TSCA	IECSC	TCSCA	K-REACH
Polymer exemption	Import available ( Polymer : Exemption Constituent monomer : Registered )	Import available ( Listed (ACTIVE) )	Import available ( Unlisted component is declared as simplified declaration <sup>2)</sup> )	Import available ( Listed )	Import not available ( New chemical substance )

1) Please be sure to contact us before imported to each country

2) Confirmed as Low Concern Polymers / Registered by NOF(Shanghai) Co., Ltd.

## 6 Application of MODIPER® AS155

**MODIPER® AS155** can be used for car interior parts to reduce squeak noise problem.

<Interior parts>



Switch



Console box



seat

Fig. 4 Application of **MODIPER® AS155**

## 7 Contacts

### **NOF CORPORATION**

Functional Materials Division  
20-3, Ebisu 4-Chome, Shibuya-ku, Tokyo 150-6012 Japan  
TEL : +81-3-5424-6685 FAX : +81-3-6837-5343  
E-mail; modiper@nof.co.jp URL : <https://www.nof.co.jp>

### **NOF EUROPE GmbH**

Hamburger Allee 2-4, 60486 Frankfurt am Main, Germany  
TEL : +49-69-7706-100-0 FAX : +49-69-7706-100-10  
E-mail; info@nofeurope.com  
URL : <https://www.nofeurope.com>

### **NOF AMERICA CORPORATION**

One North Broadway, Suite 912, White Plains, NY 10601, U.S.A.  
TEL : +1-914-681-9790 FAX : +1-914-681-9791  
E-mail; info@nofamerica.com  
URL : <https://www.nofamerica.com>

### **NOF (Shanghai) Co., Ltd.**

Room 3405-3406, 34F, Zhaofeng Plaza, No. 1027 Changning Road,  
Changning District, Shanghai, 200050, China  
TEL : +86-21-6210-1100 FAX : +86-21-3208-0270  
E-mail; info@nof.cn

All data are representative value and are not our guaranteed values.

With regard to other common thing, please refer to the safety data sheet (SDS).

**MODIPER** is a registered trademark of **NOF CORPORATION** in Japan, U.S.A. and some other countries,

3<sup>rd</sup> Edition April, 2023