



DOW CORNING™ HMB-1903 Masterbatch

FEATURES & BENEFITS

- Anti-squeaking additive (RPN < 3 as per VDA 230-206)
- No post-treatment: replacement of anti-squeaking coating's, external greases and felt
- Improved flexibility in production
- Improved wear resistance
- resistant/permanent
- Easy flowing pellets
- Applicable during compounding or injection molding
- Free-up design capabilities
- Reduce total cost of design
- Good surface finishing
- Most suitable for PC/ABS blends

COMPOSITION

- Free flowing pellets

DOW CORNING™ HMB-1903 Masterbatch is designed to be used as an additive upon compounding or in direct dilution on injection press. The product is effective in PC/ABS blends.

APPLICATIONS

- Car interior parts where plastics web contacts are required for no squeaking development.
- Typical applications are car interior such as dashboards, central console, trims.

TYPICAL PROPERTIES

Test	Property	Unit	Result
	Appearance*	-	White pellets
ISO 1133	MVR (190°C; 21.6kg)	g/10min	3
DIN 53505	Hardness Shore-A	Shore-A	81
ISO 1183	Density	gr/cm ³	1.03–1.04

*internal test.

DESCRIPTION

DOW CORNING HMB-1903 Masterbatch is a pelletized patented technology based on silicone. The product has been developed for styrenics and their blends with polycarbonate (PC/ABS)

DOW CORNING HMB-1903 Mastetbatch typical loading is between 3–5 wt% into PC/ABS removes undesirable squeaking noise generation.

HOW TO USE

It is preferred and recommended to add DOW CORNING HMB-1903 Masterbatch within a compounding process. The product can be dry-blended with main polymer pellets or added through a separate feeder in the main hopper.

It is also possible to use DOW CORNING HMB-1903 Masterbatch directly on dilution on the injection molding press. A proper counter pressure and mixing head is recommended to ensure proper dispersion of the additive.

Please contact your technical rep for advice.

Technical facts:

Tests are performed following VDA 230-206 norm using the test conditions as described in Table 1 below.

Table 1: squeak testing conditions (as per VDA 230-206)

Test	High load/High speed Long term
Plates	2.5 x 5 mm
Speed (mm/s)	4
Load (N)	40
Cycle	4050
Length (mm)	5

Material is following a total of 4050 cycles of stick slip which is intended to show the stability of the product on long term applications.

The Figure 1 shows the average Risk Priority Number (RPN) obtained on 3 independent measurements. The addition of DOW CORNING HMB-1903 Masterbatch at 4 wt% delivers RPN's below critical threshold of 3.

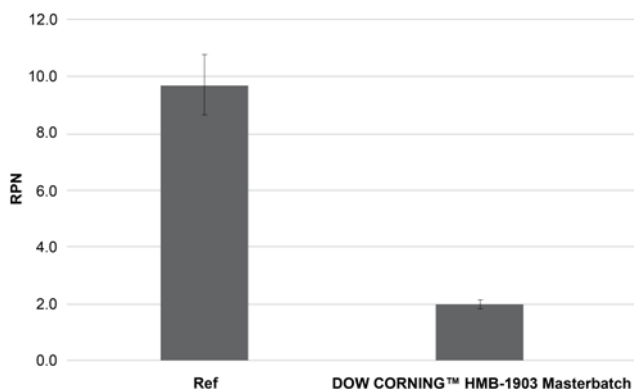


Figure 1: Risk Priority Number average (RPN) for ref PC/ABS and PC/ABS modified with 4wt% of DOW CORNING™ HMB-1903 Masterbatch.

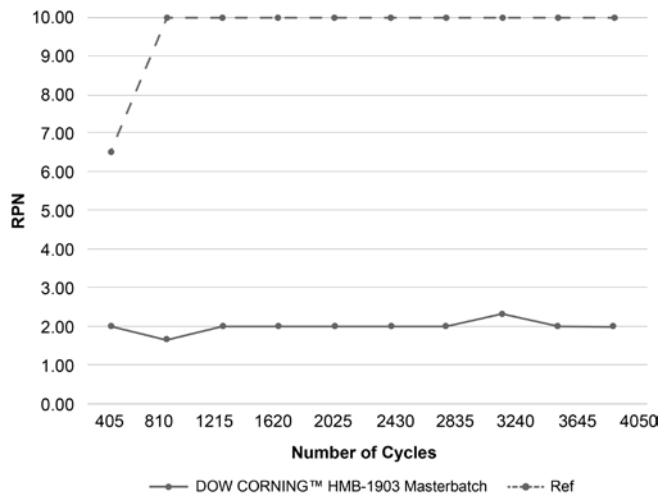


Figure 2: RPN evolution as a function of number of cycles for ref PC/ABS and PC/ABS modified with 4wt% of DOW CORNING™ HMB-1903 Masterbatch.

The Figure 2 above shows in more details the typical evolution of the RPN over the full 4050 cycles. Stable RPN value of 2 is obtained.

Finally, figure 3 shows the decrease of static and dynamic coefficient of friction obtained by a 4 wt% addition. Noteworthy to notice lower gap between Static and Dynamic COF, helping on the Stick-slip suppression.

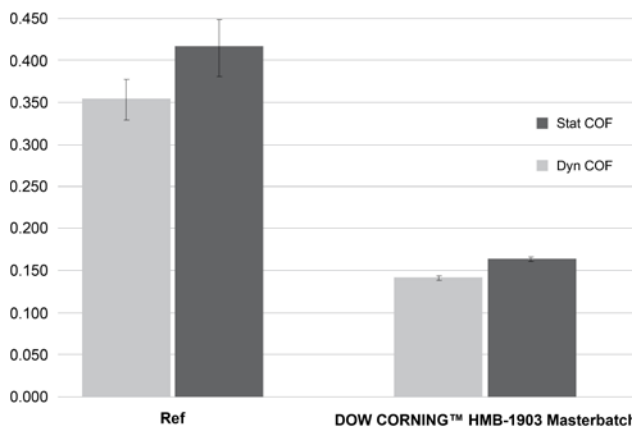


Figure 3: Static and Dynamic Coefficient of Friction (COF) for ref PC/ABS and PC/ABS modified with 4 wt% of DOW CORNING™ HMB-1903 Masterbatch.

Finally, Figure 4 shows the influence of the DOW CORNING HMB-1903 addition on the low temperature impact. When processed in the state of the art, no negative effect on the impact performances were observed.

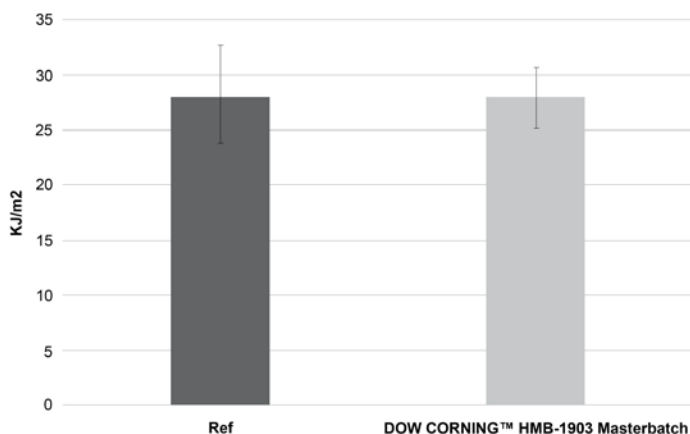


Figure 4: IZOD Notched impact at -30°C for ref PC/ABS and PC/ABS modified with 4 wt% of DOW CORNING™ HMB-1903 Masterbatch.

HANDLING PRECAUTIONS
PRODUCT SAFETY
INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored at or below 35°C (95°F) in the original unopened containers, DOW CORNING HMB-1903 Masterbatch has a usable shelf life of 48 months from the date of production.

PACKAGING INFORMATION

25 kg bags

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult

your local Dow Corning representative.

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