

Dow Corning® HMB-1103 Masterbatch

FEATURES & BENEFITS

- When used in POM compounds, *Dow Corning*® HMB-1103 Masterbatch demonstrates the following benefits when compared to standard 20 wt% PTFE formulation:
 - 50% COF improvement (against POM and steel)
 - Stable long term COF reduction against several materials such as POM or steel
 - Mechanical performances improvement
 - Efficient at low loading
 - Visual and aesthetic contribution
 - Abrasion and mar resistance improvement
 - Injectability improvement
 - Processability improvement
- Easily to handle pellets
- Suitable for low and high speed applications
- No slip-stick development
- Suitable for POM-C and POM-H

COMPOSITION

- Polyacrylate dimethyl siloxane

Tribology modifier for POM / Plastics additive

APPLICATIONS

- Designed for high demanding applications requiring long term COF reduction. Typical examples are bearings, gears and conveyor belts; window lifting systems and steering column sensors; housings and roller shutter systems; kitchen and household appliances and sports equipment.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test*	Property	Unit	Result
	Physical form	NA	White pellets
ISO 1109	Specific Gravity	Kg/l	0.98

*ISO: International Standardization Organization.

DESCRIPTION

Dow Corning HMB-1103 Masterbatch is a new generation tribological modifier for polyacetal based systems. This additive is an easy to handle, pelletized additive which has ease of processability compared to classical powdery PTFE additives.

Dow Corning HMB-1103 Masterbatch enables you to achieve lower coefficient of friction compared to standard PTFE. Typical additivation levels between 1.5 and 3.5 wt% show highly efficient coefficient of friction reduction by at least 50% vs corresponding 15–20 wt% PTFE formulations. These low dosages allow you to recover lost mechanical performances (tensile and impact) vs standard PTFE.

Dow Corning HMB-1103 Masterbatch is also highly efficient at suppressing stick-slip phenomenon following VDA 230-206 norm.

HOW TO USE

Addition levels between 1.5 and 3.5 wt% are suggested for *Dow Corning* HMB-1103 Masterbatch.

It can be used in classical melt blending process like Twin screw extruders. A physical blend with neat POM pellets and feed in 0D is suggested. The additive is also suitable for a direct dilution on injection presses.

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 in unopened original container at a max temperature of 50°C, *Dow Corning* HMB-1103 Masterbatch additive has a usable lifetime of 48 months.

PACKAGING INFORMATION

Dow Corning HMB-1103 Masterbatch is available in 5 kg bags for sampling purposes and 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.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer’s tests to ensure that our products are safe, effective, and fully satisfactory for the

intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning’s sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

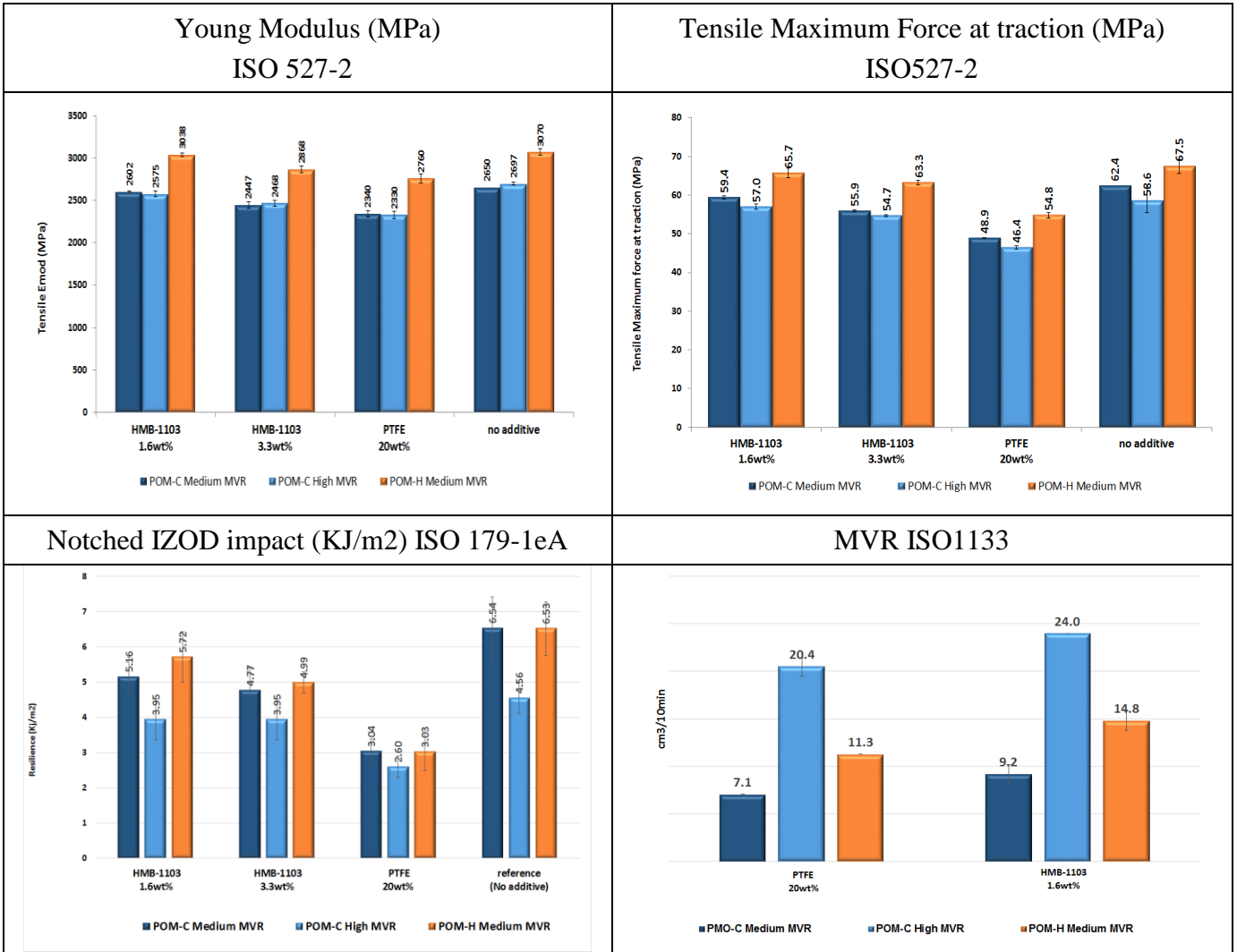
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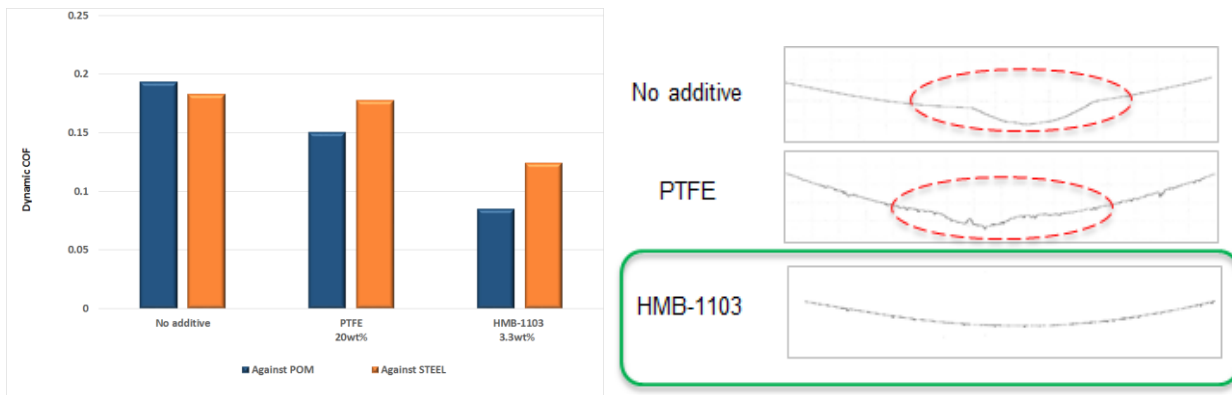
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Dow Corning HMB-1103 Masterbatch tensile performances in different POM grades:

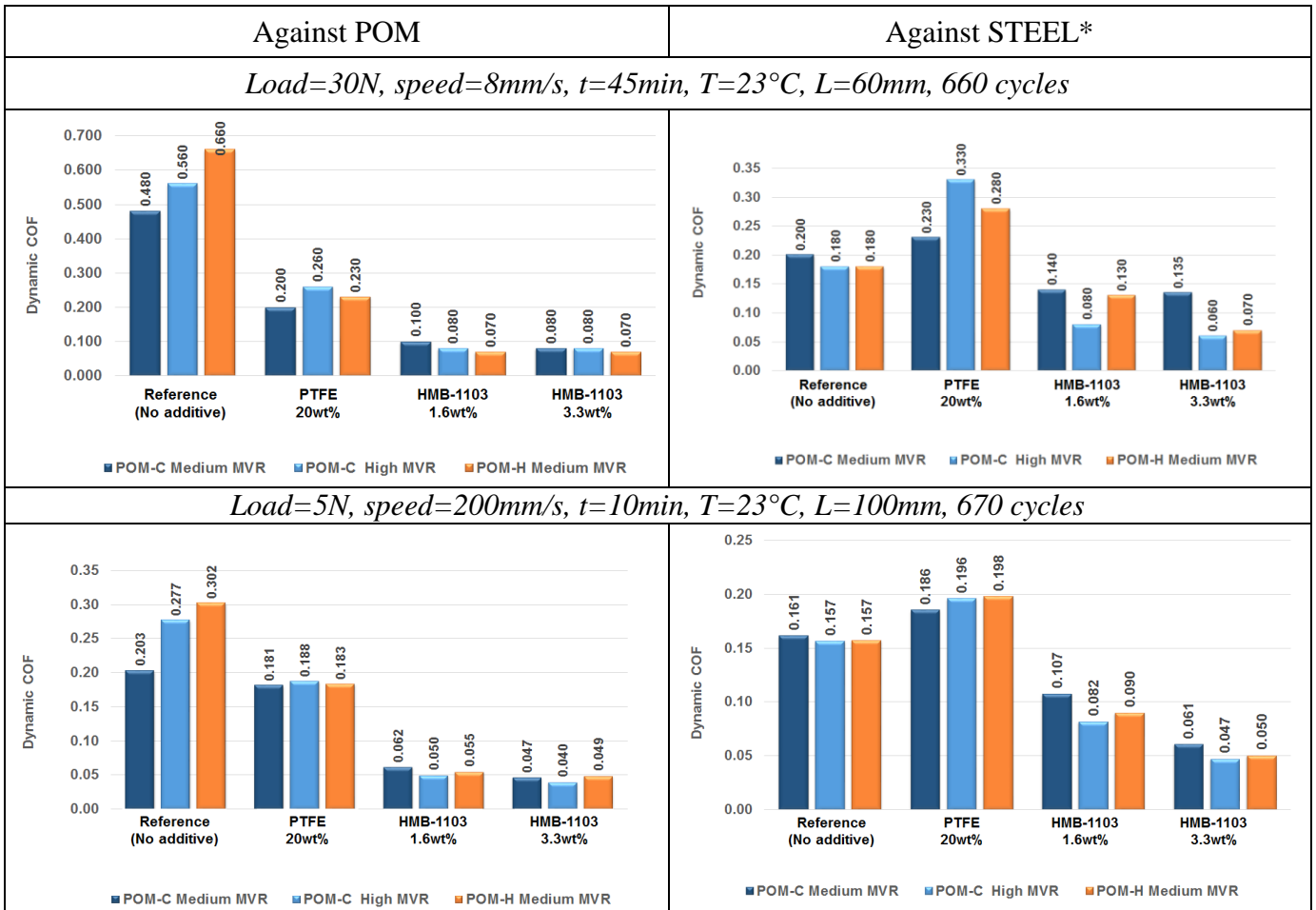


Dow Corning HMB-1103 Masterbatch long term dynamic coefficient of friction measurements under different conditions:



Dow Corning HMB-1103 Masterbatch maintains low coefficient of friction long term and is more effective at preventing surface abrasion compared to PTFE formulations.

Dow Corning HMB-1103 Masterbatch dynamic coefficient of friction measurements under different conditions:



*Rockwell C hardness 62

Dow Corning HMB-1103 Masterbatch demonstrates superior coefficient of friction improvements by at least 50% compared to a typical PTFE 20 wt% standard formulation. This allow you to reach a new class of super gliding polyacetal compounds.

Dow Corning HMB-1103 Masterbatch performances summary:

