



Technical Data Sheet

DOWSIL™ EP-5500 Powder

Tribology modifier for POM / Plastics additive

Features & Benefits

- When used in POM compounds, DOWSIL™ EP-5500 Powder 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 dispersible powder
- Suitable for low and high speed applications
- No slip-stick development
- Suitable for POM-C and POM-H

Composition

- Cross-linked silicone rubber

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.

Test ¹	Property	Unit	Result
	Physical form	NA	White powder
ISO 1109	Specific gravity	Kg/l	0.98
CTM 0025A	Bulk density	Kg/l	0.17–0.37
CTM 1138A	Mean particle size	microns	2–5

1. ISO: International Standardization Organization.
CTM: Corporate Test Method, copies of CTM's are available on request.

Description

DOWSIL™ EP-5500 Powder is a new generation tribological modifier for polyacetal based systems. This additive is an easy to handle, powdery additive.

DOWSIL™ EP-5500 Powder enables you to achieve lower coefficient of friction compared to standard PTFE. Typical addition levels between 1 and 2 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.

DOWSIL™ EP-5500 Powder is also highly efficient at suppressing stick-slip phenomenon following VDA 230-206 norm.

How to Use

Addition levels between 1 and 2% are suggested for DOWSIL™ EP-5500 Powder.

It can be used in classical melt blending processes like twin screw extruders. A physical blend with neat POM pellets and feed in 0D is suggested.

**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 WEBSITE AT CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life and
Storage**

When stored in unopened original container at a maximum temperature of 32°C, DOWSIL™ EP-5500 Powder has a usable lifetime of 27 months.

**Packaging
Information**

DOWSIL™ EP-5500 Powder is available in 10 kg bags, 20 kg boxes and 100 g boxes for sampling.

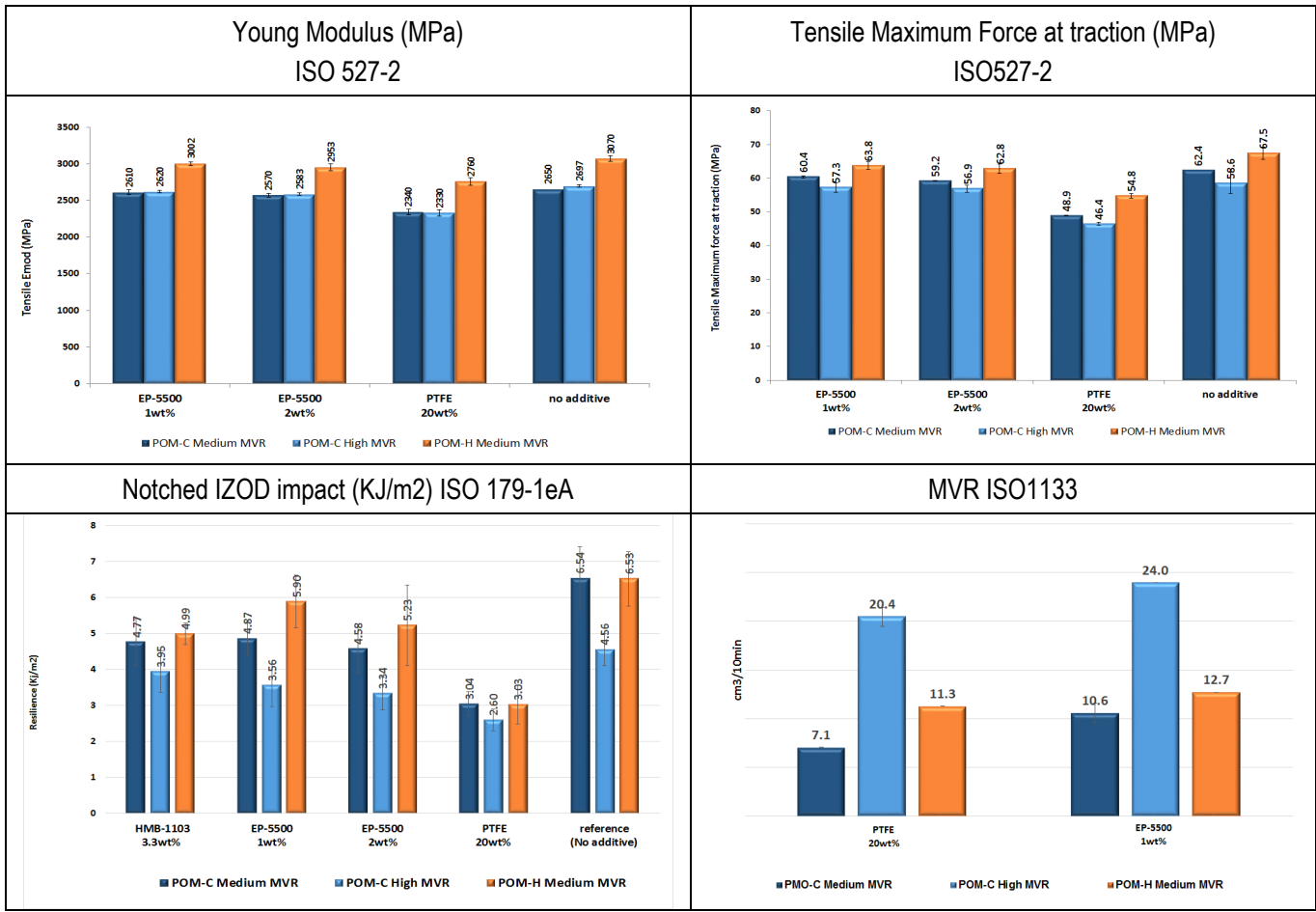
Limitations

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 has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, consumer.dow.com or consult your local Dow representative.

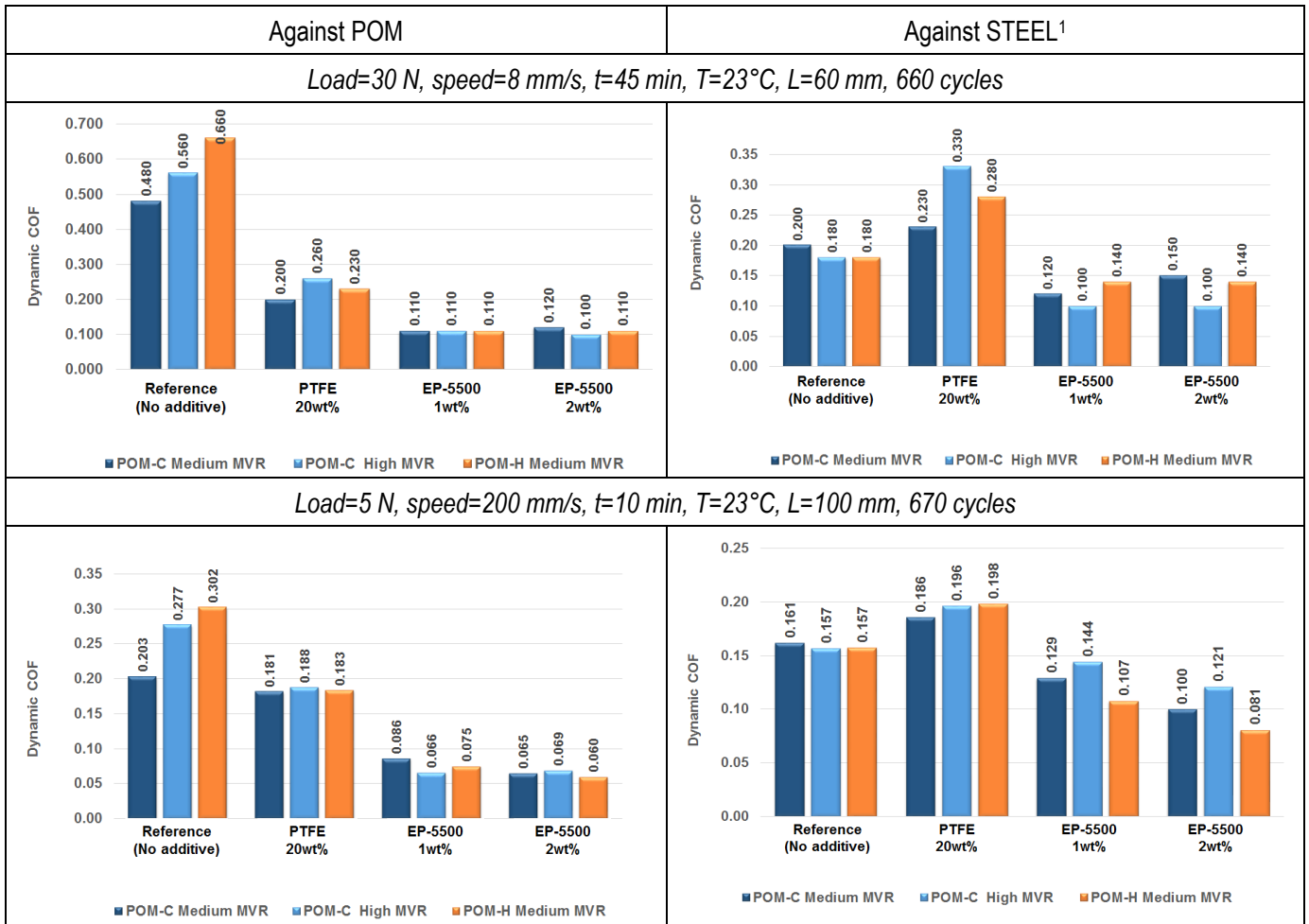


DOWSIL™ EP-5500 Powder tensile performances in different POM grades



DOWSIL™ EP-5500 Powder long term dynamic coefficient of friction measurements under different conditions:

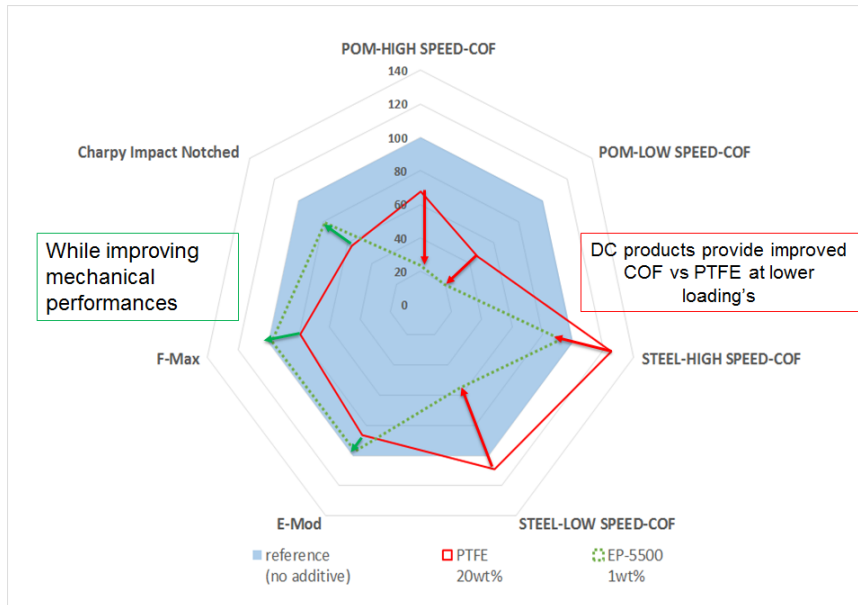
DOWSIL™ EP-5500 Powder maintains lower coefficient of friction long term and is more effective in preventing surface abrasion as compared to PTFE formulations.



DOWSIL™ EP-5500 Powder dynamic coefficient of friction measurements under different conditions

1. Rockwell C hardness 62

DOWSIL™ EP-5500 Powder demonstrates superior coefficient of friction improvements by at least 50% compared to a typical PTFE 20wt% standard formulation. This allow you to reach a new class of super gliding polyacetal compounds.



DOWSIL™ EP-5500 Powder performances summary

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