

PARALOID™ BPMS-255, BPMS-265 Melt Strength Enhancer for Polylactic Acid Resin

Description

PARALOID BPMS-200 series, acrylic melt strength enhancers for PLA, are designed to improve processability of polylactic acid and its alloys. Low melt strength of PLA creates limitations as far as melt processing, such as sagging, necking, and lower processing speeds (output). The addition of PARALOID BPMS grades at levels as low as 2%, increases the melt elasticity of the blend, without affecting clarity, thanks to the complete miscibility of the additive with the matrix, making it suitable for use in transparent packaging applications as well as paper coating and foam.

Combining its strong expertise in acrylic technology, polymer rheology, and given its commitment to sustainable developments, Rohm and Haas offers another solution to the bioplastics industry via two new additives.

Today Rohm and Haas is committed to investing in programs that drive sustainability improvements.

PARALOID BPMS-200 series provides the needed solution to allow a broader use of resins derived from renewable resources.

Application/Uses

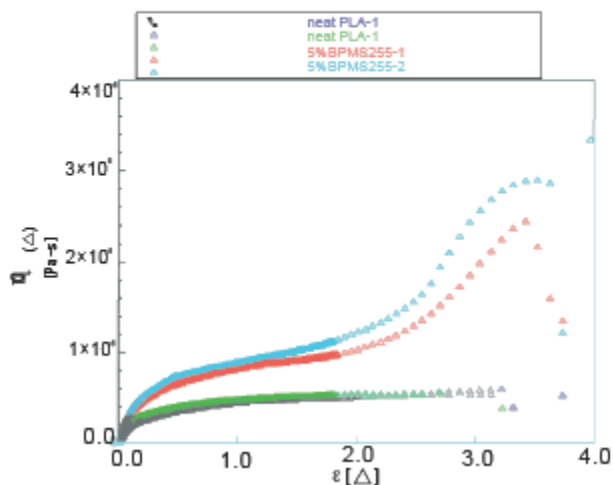
These additives are useful in applications where a high melt strength is needed in the processing of polylactic acid, such as film and sheet extrusion, blown film and foam. PARALOID BPMS-255 is designed for applications where extremely high clarity is needed, with a moderate increase in melt strength.

Melt Strength Enhancement

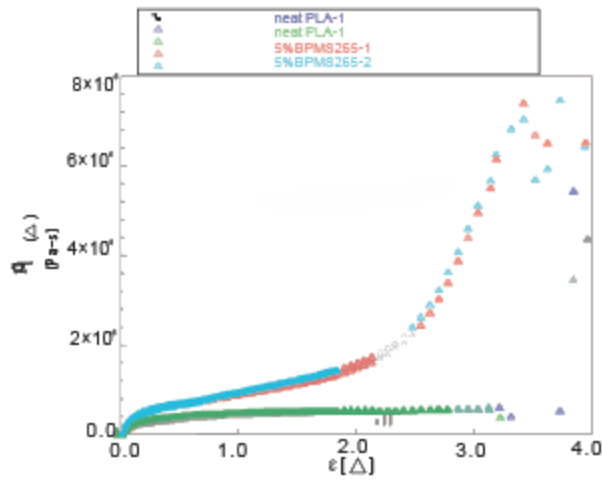
The entanglement of the chains of the high molecular weight acrylic additive with those of the PLA creates a physical network with a high resistance to break in the melt.

Use levels as low as 2% are effective in increasing the melt strength. Loadings up to 5% have been processed and tested on our laboratories with added benefits and minimum effect on the melt viscosity of the compound.

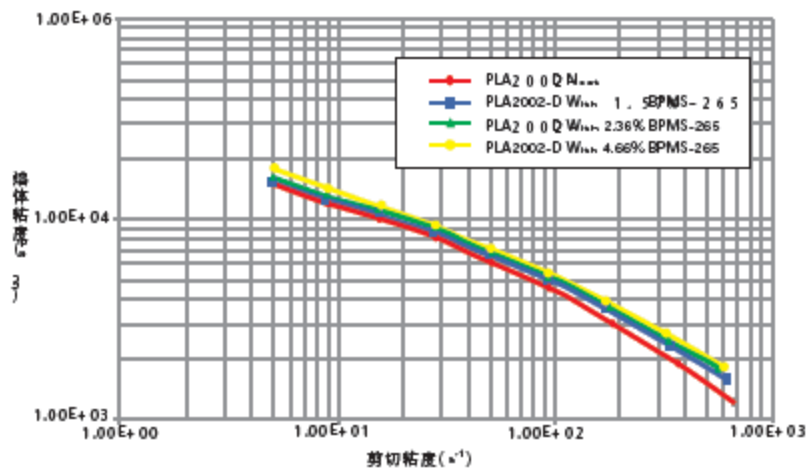
PARALOID™ BPMS-255 improves PLA Melt Strength



PARALOID™ BPMS-265 improves PLA Melt Strength



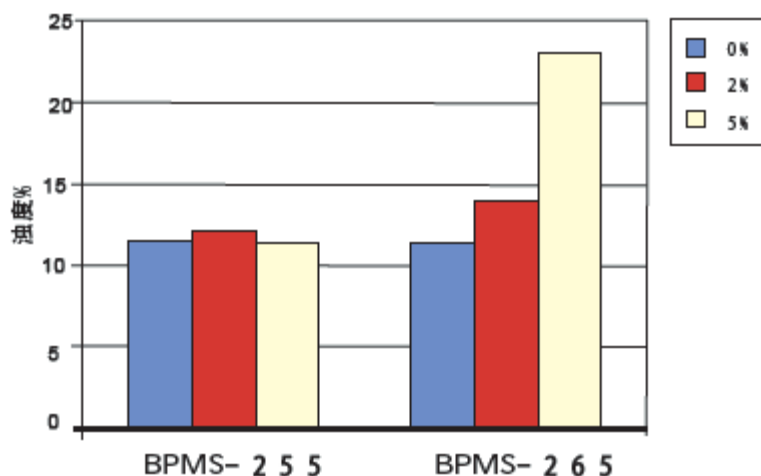
Effect on the PLA Melt Viscosity with PARALOID™ BPMS-265



Optical Performance

Thanks to the complete miscibility of the additive with the PLA resin, the addition of PARALOID BPMS-255 up to 5 wt% has minimal effect on the haze of the compound.

Effect on the clarity with BPMS



Physical Description

Appearance: free-flowing white powder
Bulk density: 0.4-0.52 g/cm³

Process Information

PARALOID BPMS-200 series is supplied in a free-flowing powder form. It is easily dispersed into PLA by controlled addition of the additive during melt mixing in a single or twin screw extruder. It is recommended that both the BPM-500 modifier and PLA resin be thoroughly dried to below 250 ppm moisture before processing.

Regulatory Compliance

PARALOID BPMS-200 series comply with EU Directive 2002/72/EC of 6 August 2002 which governs food packaging in the European Union. In compliance to US Food and Drug Administration (FDA) requirements, PARALOID BPMS-200 series may be used with all types of food at room temperature and below. We moreover recommend that you verify on a regular basis with your local Rohm and Haas Office the latest food status update of our product.

Storage, Handling, and Safety

Refer to the MSDS for guidelines.

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