

SCONA TPPL 1214 PA

Viscosity modifier for polylactic acid-based compounds to increase the melt strength and molecular weight during compounding and for improved processability of the material.

Product data

Composition

Chemically modified polylactic acid

Bio-based

Typical properties

The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Grafting functionality:	Glycidyl methacrylate
Grafting level:	> 2.5 %
Drying loss (180 min, 110 °C):	< 0.5 %
Color:	off-white
Supplied as:	powder

Storage and transportation

Store in sealed containers in a cool, dry, and well-ventilated location.

Special note

The product can crosslink if it is not diluted with unmodified base polymer during melting. Accordingly, the MVR cannot be reliably determined for this product.

Applications

Thermoplastics

Special features and benefits

SCONA TPPL 1214 PA is a high-performance polymer modifier based on a polylactic acid (PLA) functionalized with glycidyl methacrylate. Due to its reactive epoxide groups, the additive works as a viscosity enhancer in polycondensation polymers by increasing the molecular weight and therefore the viscosity during incorporation into the base polymer. In this way, excellent processability is achieved during extrusion and thermoforming. Because the additive is PLA-based, it is especially suitable for use in PLA-based compounds. In addition, SCONA TPPL 1214 PA is an outstanding compatibilizer for blends made of polylactic acid and other polar, bio-based polymers such as polybutylene succinate (PBS) and polybutylene adipate terephthalate (PBAT), because it increases the compatibility and ensures an even distribution of the blend components. SCONA TPPL 1214 PA can be used as a coupling agent in polylactic acid-based compounds that are reinforced with wood and glass fibers, improving the mechanical properties and processability.

Recommended use

Viscosity modifier	<input checked="" type="checkbox"/>
Compatibilizer	<input type="checkbox"/>
Coupling agent	<input type="checkbox"/>

especially recommended recommended

Recommended levels

Viscosity modifier: 1–10 % additive (as supplied) based on the total formulation, depending on the initial and desired (end) viscosity.

Compatibilizer: 5–30 % additive (as supplied) based on the polylactic acid content in polymer blends.

Coupling agent: 2–6 % additive (as supplied) based on the total formulation, depending on the fiber/filler content.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

The product can be added via volumetric or gravimetric dosing units during processing in all extruders.

An incorporation with high shear forces on a double screw extruder is recommended in order to prevent the formation of gel particles.



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This issue replaces all previous versions.