

Clear tack[®] Resins for Polypropylene Compounds



Benefits

- Viscosity reduction
- Non-migratory
- Good clarity
- Modulus improvement

Target Markets

- Thin-wall injection molding

Additional Information

MSDS/TDS: Clear tack[®]

Description

Clear tack[®] resins from Total Cray Valley enable high-performance polyolefin compounds with high flow for thin-wall injection molding applications with better mechanical properties than conventional viscosity modifiers. Thin-wall injection molding presents a demanding balance of material properties. To maintain part performance requirements, high stiffness is required, while to fill a thin-wall part on conventional molding equipment, higher melt flow is required. Flow modifiers or lower molecular weight polymers are conventionally used to increase flow rate but typically negatively impact mechanical properties. Clear tack resins are able to improve melt flow and increase flexural modulus at the same time.

In an unreinforced resin, the addition of 1-2% of Clear tack resins can improve flexural modulus by 5% and melt flow index by 10%. For reinforced compounds, up to 5% of Clear tack resin is recommended. Figure 1 shows the effect of 5% Clear tack W-120 resin in a conventional thermoplastic olefin (TPO) formulation. Melt flow rate is increased by more than 15% and stiffness is increased by 70%.

TECHNICAL UPDATE

Clear tack® Resins for Polypropylene Compounds

CRAY VALLEY

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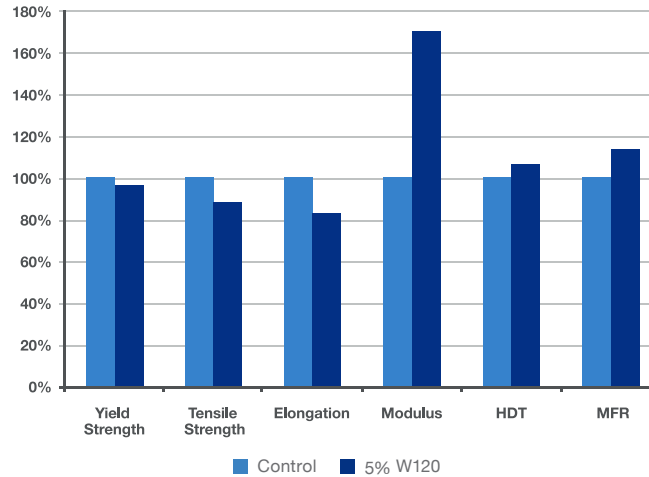


Figure 1: Effect of the addition of Clear tack in a conventional TPO formulation with 10% mineral filler, 10% EO copolymer in homopolymer PP.

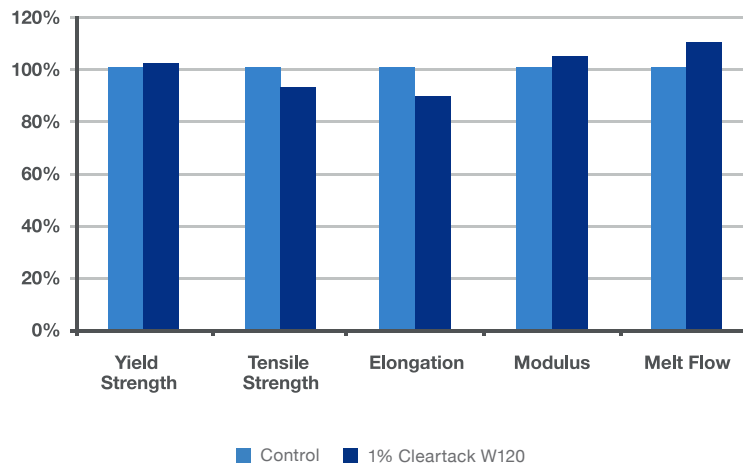


Figure 2: Effect of the addition of Clear tack in homopolymer PP.

TECHNICAL UPDATE

Cleartack® Resins for Polypropylene Compounds

CRAY VALLEY
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Cleartack W-Series resins are “water white” resins manufactured from pure aromatic monomers. Colorless and odorless, these resins are available in pastille form for easy processing in polypropylene compounds. Their thermal stability makes them particularly suitable for high-temperature applications.

Table 1: Properties of Cleartack resins.

Grade Name	M _w (g/mol)	T _g (°C)	Hazen Color
W-120	1,800	70	<40
W-140	2,000	90	<40

About Total Cray Valley

Total Cray Valley is the premier global supplier of specialty chemical additives, hydrocarbon specialty chemicals, and liquid and powder tackifying resins used as ingredients in adhesives, rubbers, polymers, coatings and other materials. Total Cray Valley has pioneered the development of these advanced technologies, introducing hundreds of products that enhance the performance of products in energy, printing, packaging, construction, tire manufacture, electronics and other demanding applications.

* The listed properties are illustrative only, and not product specifications. Total Cray Valley disclaims any liability in connection with the use of the information, and does not warrant against infringement by reason of the use of its products in connection with other materials or in any process.