



Dow Solutions for Thin Wall Containers

Toughness and Clarity

Dow Elastomers offers polyolefin based impact modifiers for thermoformed and injection molded plastic containers.

Our Role in Today's Industry

When you work with The Dow Chemical Company (Dow), you are able to tap into a rich source of plastics innovation, experience, knowledge and global reach that is virtually second to none. As a world-leading supplier of specialty plastic resins and material science innovations, Dow collaborates with customers to grow and succeed together in both existing and emerging markets.

Dow Elastomers offers a variety of product lines that are well-suited to develop exceptional thin wall container solutions. Whether your article is thermoformed or injection molded, or whether it's a rigid tote or a flexible lid, Dow works closely with you to select products that match your application needs and to explore new combinations of properties that can open the door to exciting opportunities.

Dow Solutions

Dow Elastomers has a range of unique polyolefins which are an ideal basis for thin wall containers. They are inherently versatile and can be tailored to our customers' production processes, designs and end-use.



Our portfolio of versatile polyolefin solutions includes:

- VERSIFY™ Plastomers and Elastomers
- ENGAGE™ Polyolefin Elastomers
- INFUSE™ Olefin Block Copolymers



Key Benefits

With the growth in both food and non-food packaging, performance requirements have changed. This accentuates the benefits of Dow's elastomer portfolio for thin wall container applications, providing you with opportunities to meet demands for:

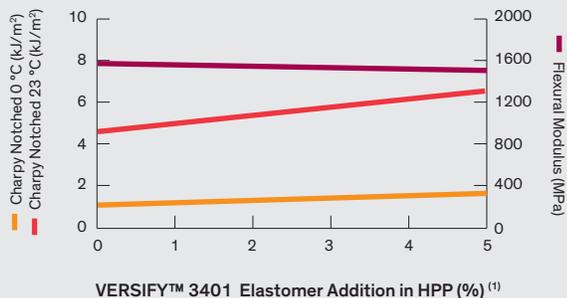
- Higher impact strength and flexibility
- Improved transparency
- Excellent taste and odor performance
- Recyclability
- Broader service temperature window
- Thinner gauges with exceptional performance
- Fast cycle times and improved processability

Product Overview – Thin Wall Thermoforming

Broad portfolio of impact modifiers to expand the application space of **polypropylene homopolymer (HPP)** resins, such as improved impact resistance at low temperatures combined with clarity.

Product	Melt Flow Rate*	Melt Index**	Density***
VERSIFY™ 2400	2		0.859
VERSIFY™ 3401	8		0.863
AFFINITY™ PL 1280G		6	0.900

* (230°C / 2.16kg) [g/10min] ** (190°C / 2.16kg [g/10min]) *** [g/cm³]



Polypropylene (PP) homopolymer resins modified with elastomers from Dow offer a combination of high toughness, good optics, and low taste and odor suitable for transparent fridge and freezer applications. VERSIFY™ propylene-based elastomers allow for a full PP solution with easy regrinding and recycling, and AFFINITY™ ethylene-based elastomers offer excellent low temperature impact performance.

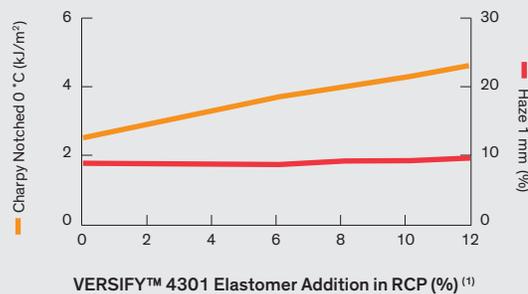
Requirement	Structure
0°C (meat, seafood)	PP Homopolymer + 5 to 7 % VERSIFY™ 2400 PP Homopolymer + 5 to 7 % VERSIFY™ 3401
-10°C (minced meat)	PP Homopolymer + 10 % VERSIFY™ 2400
-30°C (deep freeze)	PP Homopolymer + 20 % AFFINITY™ PL 1280G

Product Overview – Thin Wall Injection Molding

Broad portfolio of impact modifiers to expand the application space of **polypropylene random copolymer (RCP)** and homopolymer resins, such as improved impact resistance at low temperatures combined with high clarity.

Product	Melt Flow Rate*	Melt Index**	Density***
VERSIFY™ 4301	25		0.868
ENGAGE™ 8401		30	0.885
INFUSE™ 9817		15	0.877

* (230°C / 2.16kg) [g/10min] ** (190°C / 2.16kg [g/10min]) *** [g/cm³]



High-flow, polypropylene random copolymers modified with elastomers from Dow offer a combination of high toughness, excellent clarity, and low taste and odor for transparent, thin wall containers. VERSIFY™ propylene-based elastomers allow for a full PP solution with easy recycling, ENGAGE™ and INFUSE™ ethylene-based elastomers offer excellent low temperature impact performance.



⁽¹⁾ Data per tests conducted by Dow. Test protocols and additional information available upon request. Properties shown are typical not to be construed as specifications.

Contact a Dow representative today to learn more.
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