



For Immediate Release

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Recycled Plastic Comes of Age in the Manufacture of Drums for Hazmat

SEVERNA PARK, Md. (Nov. 15, 2016) – Since June of 2011 over 4 million recycled content plastic drums have been manufactured and certified for transport of hazardous materials. Plastic Drum Institute (PDI) members have consistently demonstrated the safety and reliability of drums manufactured from recycled resins. Because of the plastic drum industry's excellent track record on manufacturing drums from recycled resins, PDI members were recently issued approvals by the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) requiring a retest frequency on par with that for plastic drums made from virgin resin.

PDI members first began studying the use of recycled resins in the manufacture of hazmat packagings in 1982. They approached DOT with the idea of using recycled resins in the mid-1990s and were first issued approvals in 1997. When the initial approvals were issued by DOT, everyone agreed that it was prudent to take a cautious approach through additional safeguards going well beyond those required for drums made of virgin resins. The idea was that as the safety and reliability of the practice of using recycled resins was proven, less stringent controls could be required.

Recycled resins come from the grinding down of previously used plastic hazmat packagings. For quality control purposes, only plastic packagings having contained certain specified hazmat may be used. In addition, the quality of recycled resins used is ensured through close control of resin properties through melt flow index and density testing of resin samples. Under DOT approval, recycled content resins are used to produce UN1H1 and UN1H2 plastic drums at the Packing Group II and Packing Group III performance levels. Under the originally issued approvals, drums were subjected to periodic retesting using UN performance tests almost daily. Over time, as experience was gained, the testing frequency for resin properties was adjusted and the required periodic retesting frequency was reduced. PDI manufacturers believe that testing of recycled resin properties at the current level is essential to producing a quality product; but PDI on behalf of its members had asked PHMSA to reduce the frequency of periodic testing to the same frequency as required for new UN drums made of virgin resins.

In working with PHMSA, PDI members presented data indicating the production of more than four million UN 1H1 and 1H2 drums made from recycled resins between June 1, 2011 and August 31, 2015. During that same period, members conducted 2,393 melt flow tests and 2,393 density tests on approximately 80 million pounds of recycled plastic materials demonstrating consistent compliance with resin specifications established by PHMSA. Retesting in accordance with UN tests was done every 30 days and demonstrated that the drums consistently performed the same as drums of virgin resins. During this period, recycled content plastic drums were successfully used in the transport of hazardous materials with no known reported incidents. In response to PDI requests, PHMSA issued new approvals

establishing a retest frequency for recycled plastic drums that coincides with that for drums made of virgin resins, once every 12 months.

“The rigorous testing data provided by our members played a key role in PHMSA’s decision to extend the period between tests,” said Jerry Geyer, chair of PDI and product management and development director at Greif. “Proper qualification and testing of material is important to successfully produce UN1H1 and UN1H2 plastic drums. However, as our experience with both virgin and recycled content resin demonstrates, these materials sturdily and consistently hold up to all the required tests so that we believed less testing of completed drums was well justified.”

The combined effects from years of PDI member experience, careful control of recycled resin quality, extensive testing and use of packagings in the hazmat transportation environment, has validated the use of recycled plastic resins in the manufacture of hazmat packagings ensuring a level of performance consistent with that of drums made from virgin resins.

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The Plastic Drum Institute (PDI) represents the manufacturers and suppliers for the North American plastic drum industry. Members include container fabricators, resin suppliers, machinery manufacturers, closure manufacturers, reconditioning and recycling companies, miscellaneous service and equipment companies, and consultants. PDI is a proud member of the [Industrial Packaging Association of North America](#). Learn more at www.plasticdrum.org.