XYLOX PRODUCT COMPARISON TO TPE MADE FROM VIRGIN MATERIAL

THE RESPONSIBLE ALTERNATIVE

PRODUCT DESCRIPTION:

XyloX (TPE) is a revolutionary form of Thermoplastic Elastomer made entirely from *100% recycled material*. The proprietary compounding process uses recycled post-consumer plastic pellets and recycled tires reprocessed rubber crumb to create a molecular bond of the polymer chains. This is accomplished without the use of additional bonding agents providing a consistent and repeatable (TPE) material.

XyloX is currently available in two basic formulations. Custom formulations available.

1. XyloX PP: Polypropylene combined with crumb rubber in various concentration
2. XyloX HDPE: High Density Polyethylene with crumb rubber in various concentrations

PRODUCT COMPARISON:

Molding tests performed, compared two formulations of XyloX with a common resin used extensively in the automotive industry.

A 2-up mold using an automotive part was chosen for the trial. The customer's part was first shot using Formolene 6535N supplied by Formosa Plastics. Formolene 6535N is an engineered, medium impact copolymer polypropylene.

It was specifically developed to meet the OEM demands for automotive interior trim applications, with proven injection molding economy. The material was approved for interior trim under:

- GM-PP-033
- DCX MSB-500

Fifty sets of the virgin Formolene 6535N part were run for comparison purposes.

Two formulations of XyloX PP were also run, a 25% rubber, 75% polypropylene formulation and a 30% rubber, 70% polypropylene formulation. Additionally, a run was made combining XyloX with a red colorant.

OBSERVATIONS:

1. XyloX could be run 50 (°F) degrees cooler than the Formolene resulting in lower heating costs.
2. XyloX when melted had a lower viscosity then Formolene resulting in lower energy costs.
3. Recovery time with XyloX was approximately 9% lower then with Formolene.
4. XyloX readily accepted colorant, however, due to the dark grey of the resin only brighter colors (Reds, Blue, Green etc.) would be possible. Additional testing indicated that XyloX could be readily painted with most industrial coatings.
5. XyloX demonstrated no noticeable shrinkage in any of the parts shot.



ADVANTAGES AND CHARACTERISTICS:

1. XyloX is a true (TPE), not a thermoset.
2. XyloX is formulated using only 100% recycled material. When used at 100% concentrations, product manufactured using XyloX can themselves be recycled into new product.
3. XyloX is blended using recycled tire crumb and post-industrial waste plastics.
4. The process creates a molecular bond between the two raw materials.
5. XyloX can be used to replace many categories of (TPE) made from virgin materials.
6. XyloX typically has a lower melting point and viscosity representing significant energy savings.
7. Recovery times are reduced significantly.
8. XyloX can be run through any injection molding machine capable of processing virgin (TPEs).
9. By adjusting the rubber/plastic ratios, custom blends can be formulated to suit many client requirements or specifications.
10. XyloX can be blended with additional virgin products for specific requirements.
11. XyloX can be overcoated with any industrial coating or adhesive.
12. XyloX is highly resistant to aging and UV degradation.
13. XyloX has been used to produce numerous parts and sheet materials.
14. XyloX is an ideal replacement for TPOs.

The buyer must perform all tests necessary to confirm whether the product and its performance and qualities are suitable for the intended application. Final determination of fitness of the product for the intended application is the buyer's responsibility. ReNeuvo Properties Cambridge Inc. shall not be liable for any misuse or misapplication of its products.
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