

- Silgan currently produces bottles with up to 100% PET PCR in a monolayer application
- Silgan currently uses non-food grade PET PCR from one qualified source for both 1-step and 2-step applications
- FDA approved Food Grade PET PCR resin is available from one qualified source and has been tested by Silgan
- Samples are available utilizing either food grade or non-food grade PET PCR resin in the percentages tested below



## 1-Step PET PCR Test Results

- Tested at 4 different loadings of PET PCR (25%, 50%, 75% and 100%) in both food grade and non-food grade versions against a control of virgin PET
- Test Bottle— 1 Liter Bullet Round (Bottle Code 45364)
- Top Load
  - Non-Food Grade PCR— Top load increased as percentage of PCR increased
  - Food-Grade PCR— Top load saw minimal changes as the percentage of PCR increased
- Drop Impact— No dramatic change in drop impact compared to virgin material as percentage of PCR increased
  - The 100% non-food grade PCR bottle failed at the lowest height of 8.13 ft
- Color/Appearance
  - As the percentage of regrind increased the percentage of visible color increased with no difference in the color between food grade and non-food grade PET PCR
  - Obvious imperfections were noted on the 100% PCR bottles
- Dimensions— Very similar to virgin PET
- Processing— No issues at any of the tested PCR loadings

## 2-Step PET PCR Test Results

- Tested at 4 different loadings of PET PCR (25%, 50%, 75% and 100%) in both food grade and non-food grade versions against a control of virgin PET
- Test Bottle—33 oz Sprayer (Bottle Code 45056)
- Top Load
  - Non-Food Grade PCR— Top load decreased by 10% for all samples
  - Food-Grade PCR—Top load saw minimal changes as the percentage of PCR increased as compared to the control bottles
- Drop Impact— 25% PCR loading had no affect on the drop impact of the bottles. As the amount of PCR increased, the drop impact performance did decrease, but not below acceptable standards
  - The lowest failure occurred at 10 feet
- Color/Appearance
  - As the percentage of regrind increased the percentage of visible color increased with no difference in the color between food grade and non-food grade PET PCR
  - Obvious imperfections were noted on the 100% PCR bottles
- Dimensions— Very similar to virgin PET except the PCR bottles recorded a taller overall bottle height and the front-to-back dimensions were smaller than the virgin control samples
- Processing— No issues at any of the tested PCR loadings

\*\*Test results will vary depending on bottle design. Customer specific testing is highly recommended\*\*