

## MATERIAL SPECIFICATION BOTTLE 2 GRADE

Form No: INSP\_SD006  
Revision No: 02  
Effective Date: 15 June 2017

Issued by: Quality Manager  
Approved by: General Manager

### 1 Product Information

**Product:** Recycled Polyethylene Terephthalate (rPET)  
**Brand:** Savuka  
**Grade:** Bottle 2

### 2 Material Specifications

Quality Parameter	Unit	Specification	Test Method
Acetaldehyde	ppm	< 1.5	Headspace gas chromatography
Limonene	ppb	< 20	Gas chromatography
Intrinsic Viscosity	dL/g	0.82 ± 0.03	Melt flow index
Colour L*	CIE	> 70	Spectrophotometer
Colour a*	CIE	> -3	Spectrophotometer
Colour b*	CIE	< 12	Spectrophotometer
Bulk density	kg/m <sup>3</sup>	820 ± 30	-
Moisture	%	< 0.2	Moisture balance

Several quality tests are performed on the material; which include, but are not limited to determining the concentration of acetaldehyde, limonene and benzene in the material. The Bottle 2 grade rPET produced by Mpact Polymers (Pty) Ltd can thus be considered safe for use in food contact packaging limited by the conditions of use.

### 3 Conditions of use

The process technology used to produce the rPET pellets has been approved by the FDA for use in food contact materials under the following conditions:

1. Hot filled or pasteurized above 65.5 °C
2. Hot filled or pasteurized below 65.5 °C
3. Room temperature filled and stored (no thermal treatment in the container)
4. Refrigerated storage (no thermal treatment in the container)
5. Frozen storage (no thermal treatment in the container)

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In addition to the FDA approval the material has been tested in accordance with EU Directive 10/2011 and is approved for use at 100% content in contact with all kinds of food at long term storage at room temperature and below.

### 4 Intended Use and Application

rPET may be used as an alternative to virgin PET in most applications, including carbonated beverages (CSB), non-carbonated beverages and sheeting used for food packaging. Normal processing conditions for PET apply.

rPET, as with virgin PET, is naturally hydroscopic and as such must be properly dried prior to use.

### 5 Packaging, Labelling and Distribution

rPET is packaged in an LDPE inner liner and an outer PP woven bulk bag. The bags are labelled with a lot number, a bag weight and a grade (colour coded as per the different grades – Bottle 2 grade is purple). These bags are transported on flatbed trucks with curtains.

Alternatively, rPET may also be stored in a water tight bulk silo and transported in a tanker.

### 6 Storage Conditions and Intended Shelf Life

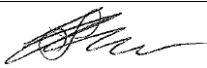


rPET must be stored in normal warehousing conditions, away from direct sunlight and all sources of moisture.

Provided that the inner liner is intact, and the product is stored unopened as recommended, the shelf life of rPET is 2 years.

After opening, left over product must be sufficiently sealed to prevent excessive accumulation of moisture.

### 7 Approvals

The signatures below certify that this specification has been reviewed and accepted, and demonstrates that the signatories are aware of all the requirements contained herein and are committed to ensuring their provision

	Name	Signature	Position	Date
<b>Prepared By:</b>	Shannon vd Merwe		Quality Manager	15/06/2017
<b>Approved By:</b>	Nicholas Schild		General Manager	15/06/2017
<b>Issued By:</b>	Shannon vd Merwe		Quality Manager	15/06/2017