COmité
Technique de
Recyclage des
Emballages
Plastiques

TECHNICAL NOTICE VLP 08_01
OXYGEN BARRIER (PET based)

REQUESTED BY: **Artenius PET Packaging Europe**

- *Date of request*: October 28th, 2008

DESCRIPTION OF BARIER SYSTEM

- *Trademark:* monoBLOx+

- *Description*: monolayer active oxygen scavenger

- *Application:* PET bottles

MARKET:

- Food application

TECHNICAL OPINION

The behaviour of this barrier solution was analysed on the PET stream.

The monoBLOx + solution's behaviour during recycling was studied in reclaiming and recycling tests on a pilot line representing the lines used by PET recyclers in Europe. Details of the tests conducted in the various studies are given in sheet FT 36.

In the colourless transparent bottle and sheet recycling stage, the presence of monoBLOx + in RPET flakes or granules leads to yellowing of end products depending on monoBLOx + concentration.

In the fibre recycling stage studied (continuous fibres, diameter corresponding to 5 decitex[1]), the presence of monoBLOx + in RPET flakes or granules caused no major disruption in the process or the quality of the fibres obtained.

Given the consequences on recycling and in the current state of equipment and techniques used and available in Europe:

- **For dark coloured bottles: COTREP is favourable to the use of this barrier solution.** This stream of bottles is indeed mainly recycled into fibres.
- **For light coloured and transparent bottles, COTREP advises against using this type of solution** and recommends studying substitute systems that would limit the yellowing effect.

Written in Puteaux on 17/12/2009

CO.T.R.E.P.

Carlos de Los Llanos | Benoit Lefebvre | Tristan Brunin

[1] A decitex corresponds to the weight in grams of 10,000 meters of thread