

## INNOVATIVE PURGING FOR PRODUCTION OF PREFORMS AND CAPS



Pet as a widely used and consolidated material in packaging, particularly of bottles of any kind which must have a certain specific quality, presents still today quite a lot of problems during production. The main issues concern the so-called “black specs” which are due to cracked PET rests inside the barrel and/or on the screw and the continuous stripes on the produced parts during color changes – due to burnt master batch rests - . These problems slow down production cycle which may last from a few minutes (in best conditions) up to different shifts (in worst cases) and increases waste production which cannot be afforded today by modern and competitive industries.

General and/or universal purging compounds certainly will help to reduce waste production but often take a lot of time for changing processing parameters and setting values on the machine, such as temperature

increase, screw moving and other.

Up to now Ultra System was producing two grades for preforms production: ULTRA PLAST PET, for screw/barrel/accumulator cleaning and ULTRA PLAST PET-HS, specific for hot runners.

These two products will remain in the product range of Ultra System, as they are very appreciated from the customers, but the new product, ULTRA PLAST PET-C, can be used for screw and hot runner cleaning, avoiding any mistake during purging.

This new product is more effective on screw and accumulator cleaning (tests made in our laboratory and confirmed by customers show from 1.5 to 2 times better efficiency than the ULTRA PLAST PET and PET-HS), even with high pigment concentration.

It is a very easily to handle product which, properly and regularly used, according to the machine and hotrunner conditions as well as masterbatch type, will help to reduce waste production.

As the new masterbatches blue and green contain a high quantity of phtalocyanines , they are very difficult to remove and this is the reason why a new formulation of both, the carrier material and the active part have been developed: the latter has been partially changed by increasing the solving and absorbing power, whereas the carrier material has been increased in viscosity and melting point in order to generate an higher pressure, but at the same time sufficiently fluid to reach any stagnation point and remove burnt material and color rests.

Another purging compound grade to mention is the UP PO and UP PO-HS used by many cap and closure producers worldwide: thanks to the use of these two grades the waste production in some cases could be reduced by 90%.

For very special and difficult cases where new masterbatches are used, Ultra System developed two new grades, one for screw/barrel ULTRA PLAST PO-E and one for the hotrunner system ULTRA PLAST PO-C.

These brand-new grades are more efficient and have a bigger cleaning effect on difficult masterbatches; they are used in the very same way as the PO and PO-HS.

All components used in our purging compounds have a food approval certificate and are FDA approved so that they can be used without any problem on machines with pet preform production, medical and pharmaceutical container production as well as for caps and closures.

