

PLEASE NOTE: IF YOU USE BLACK CORE TRAYS, IT IS QUITE LIKELY THEY ARE MADE WITH RECYCLED/REGRIND MATERIAL

Why Impala do not use recycled/regrind material, in all Impala core trays we *only* use virgin material

While Impala and Westernex totally support efforts to recycle plastic material but to use regrind in a core tray is not good practice.

Polypropylene is weakened by approximately 10% each time it passes through a heat cycle. A heat cycle is when the material passes through a plastic injection mold machine to make a product, so regrind material will possible have material in it that has been recycled and put through machines a number of times.

A product such as a core tray with comparatively thin walls can be very brittle using regrind, it all depends in the batch of regrind as no one knows what's in a particular batch, also regrind material no matter how much UV stabiliser is used it will not have better UV resistance then virgin material with UV stabiliser and quite possibly worse resistance depending on the batch of regrind. In more technical terms.

In more technical terms:

The breakdown in physical properties of a polymer such as PP is generally referred to as a reduction in molecular weight Eg the length of the molecule get shorter.

A polymer may suffer reduction in molecular weight in several ways but we are concerned with heat history e.g. number of times the material has passed through a moulding machine & UV stability sun exposure both result in a reduction in molecular weight.

If a polymer is recycled the heat history means it has already suffered a reduction in molecular weight in the same way as extended sun exposure.

Therefore, it doesn't matter how much UV stabiliser you put in the material the damage is already done because its regrind / re-processed – like putting a bottle of milk that's already gone off in the fridge waste of time you are stuck with the current physical state.

In summary, it is not worth buying slightly cheaper trays made of regrind or recycled material as it will never last as long or be as resilient as a tray made with virgin material.

For more information, visit:

<https://www.amcopolymers.com/news/molecular-weight-and-its-effects-on-polymer-properties>

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