

## Recommendations for the extrusion of recycled materials

The recycled materials have to be supplied with less than 1% of moisture for 100% polymer materials and less than 5% for materials containing vegetal fillers. If the moisture content is higher, the materials will be dried using air dryers with a dew point of  $-40^{\circ}\text{C}$ , with additional costs for the customer.

The diameter of the recycled material particles has to be inferior to 8 mm, otherwise the materials will be ground by Certech or a partner laboratory with additional costs for the customer.

The shape (flakes, pellets, fibers,...) and apparent density need to be documented in order to evaluate the feasibility of the extrusion.

Recycled materials will have to be free of hard and non-melting contaminants (such as metals, stones, long fibers, thermoset resins,...) with a diameter superior to 1mm. If a damage linked to such contaminants occurs to our equipment during the extrusion, the reparation or the replacement of broken parts will be charged to the customer. In the case of suspected contaminations, an identification can be performed by Certech with additional costs for the customer. In order to remove the contaminants, screening methods can be applied to the materials by a partner laboratory with additional costs for the customer.

The customer will inform Certech about the presence of hard or non-melting contaminants with a diameter less than 1mm in order for Certech to propose a filtration step. The acceptable content of such contaminants in the recycled material is max. 3 w/w % for a filtration step.

The customer will inform Certech about the presence of polyvinylchloride (PVC). Specific purge and cleaning steps will be implemented.

If the recycled material is supplied in a big bag packaging, the customer will ensure its homogeneity in order to allow for representative random sampling. If it's not the case, a mechanical homogenization will be performed with additional costs for the customer.

The customer will provide the maximum of information (safety data sheet, technical data sheet ...) about the composition of the recycled material in order to prevent any risk for the operators during extrusion. Certech reserves the right to refuse some hazardous materials like medical waste (DASRI), plastics having contained hazardous products,...