

## COLLECTION SCHEMES

### MUNICIPAL COLLECTION

Drop-off at a  
municipal  
recycling  
centre

### DEPOSIT AT SHOPS

Free of charge on  
one-to-one basis



# WEEE COLLECTION

WASTE ELECTRICAL & ELECTRONIC EQUIPMENT

## SORTING

Scrap yards pre-sort WEEE waste in accordance with different categories: large domestic appliances, cooling & freezing appliances, small consumer appliances and lamps.



## DID YOU KNOW ?

Separate collection of different WEEE categories reduces complexity of the plastic mixtures, leading to higher output qualities.

Hazardous substances and other components (e.g.: metals) are removed manually. WEEE is then shredded and further sorted mechanically.

## WEEE WASTE ELECTRICAL & ELECTRONIC EQUIPMENT SHREDDING

# 2

The outcome of this process is a heterogenous mixture of polymers with all kinds of additives. The mixture also contains contaminants like glass, wood, rubber and metals, which present 2-10% of the mixture.

### DID YOU KNOW ?

Only in specific cases, like TV sets or WEEE monostreams, it is worth to manually dismantle plastic parts to reach higher quality. In most of other cases the quality gain is neither time nor cost efficient.



Mixed non ferrous metals (separated)

## GRINDING

WEEE plastics are ground to smaller pieces. This is necessary for the compounding step. It also facilitates further separation as a more uniform flake size increases its efficiency.

# WEEE 3

## WASTE ELECTRICAL & ELECTRONIC EQUIPMENT GRINDING & SEPARATION

## DENSITY SEPARATION

Flakes pass through a series of sink-float tanks with different densities to separate PS, ABS, PP and PE. The heaviest fraction is the one which contains the hazardous substances (e.g. brominated flame retardants). This fraction is too complex and not cost efficient to separate it further.

## PURIFICATION

Often further separation steps are needed to increase the purity of the polymer and to remove contaminants like wood and rubber. Density separation may not be enough to reach 95% purity due to overlapping densities.

## WASHING & DRYING

Flakes are washed in a warm water to remove dust, dirt & glue. At the end of the process they are dried in order to be compounded.

PS flakes are melted and extruded into pellets. Filtering system during the extrusion process removes last remaining contaminants. These pellets are compounded into a number of new products and appliances.

# WEEE WASTE ELECTRICAL & ELECTRONIC EQUIPMENT COMPOUNDING & EXTRUSION

# 4



## DID YOU KNOW?

Because of the different colours used in WEEE plastics, the pellets come out as dark grey or even black. Only in special cases, like fridges or PC monitors, it is possible to make white pellets and coloured ones when masterbatch is added.