

**To:**

Cefla s.c

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## REMEDIA'S MANAGEMENT OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) - R4 GROUPING

Consorzio Remedia is the leading consortium in Italy for the eco-sustainable management of (WEEE) and batteries and accumulators (B&A) that have reached the end of their life.

In addition, Remedia is a member of WEEE Forum, WEEELabex, Eucobat, which are the most important organizations in Europe for WEEE and waste battery and accumulator management. It is also a co-founder of WEEE Europe, a joint venture of the main European collective schemes that support Producers throughout Europe regarding all legal obligations relating to the EU WEEE and battery and accumulator Directives.

In Italy, household WEEE is managed and stored according to a precise subdivision into 5 different groupings, in accordance with a procedure that uses different treatment and recycling technologies.

Medical equipment is managed in grouping R4, which also contains all PED (small household appliances), CE (Consumer Electronics), tools, toys, home fitness and IT (computers and telecoms equipment).

Almost all the technological waste treated by Remedia is sent for the recovery of materials (on average around 90% - Source: data provided by Remedia and processed by Sustainable Development Foundation).

The table below shows an estimate of data relating to energy and material recovery, reuse and disposal of R4 waste:

	Percentages
<b>Materials recovery</b>	<b>90.92%</b>
<b>Reuse</b>	<b>0.37%</b>
<b>Landfill Disposal</b>	<b>3.95%</b>
<b>Incineration Disposal</b>	<b>0.37%</b>
<b>Energy recovery</b>	<b>4.40%</b>
<b>Total</b>	<b>100.00%</b>



We assume that the same percentages can also be applied to the same types of equipment that are classified as professional WEEE because the treatment is the same.

Recovery percentages reported in the table meet and exceed the objectives set by the Italian legislation.

The main type of recycled material is represented by metals, reused in the corresponding industrial chains (steelworks, foundry, lead industry, metallurgical industry), followed by glass, mainly coming from monitors and light sources and reused in the glass and ceramic industry, and by plastics, sent for different recycling processes according to the polymer characteristics. Polyurethane foams, used as insulating material for large household appliances, represent the most common material sent for energy recovery, with the remaining part consisting of plastics.

Currently, is not in force a specific law that requires to plants to declare the secondary raw materials resulting from treatment (except the Italian MUD declaration, of which it has visibility only the Italian Ministry of the Environment).

Therefore, data relating to the fractions generated by the treatment of WEEE are extrapolated from the RepTool platform, used periodically by WEEE treatment plants to declare the types of waste treated and the fractions generated.

RepTool (<https://weee-forum.org/wf-reptool/>) is a tool implemented by WEEE FORUM, an international organization of which Remedia is a member, whose purpose is to allow member consortia to improve WEEE collection, treatment and recycling activities through the constant exchange of best practices , data and research.

The table below shows the estimated average energy and material recovery, reuse and disposal of by commodity fraction resulting from the treatment of R4:

	Type	Fraction	%	
<i>Reuse</i>  <i>Materials recovery</i>	Other	R4	toner	0,37%
	Metals	R4	steel	1,31%
	Metals	R4	aluminum	3,63%
	Metals	R4	Other metals	2,64%
	Other	R4	batteries	0,00%
	Other	R4	paper and cardboard	0,02%
	Other	R4	concrete	0,01%
	Other	R4	generic components	0,65%
	Metals	R4	iron	49,01%
	Other	R4	wood	0,64%
	Other	R4	oil	0,01%
	Metals	R4	lead	0,32%





	Plastic	R4	plastic	26,93%
	Metals	R4	copper	5,58%
	Other	R4	rare-earth elements	0,00%
	Glass	R4	glass	0,18%
<i>Energy Recovery</i>	Other	R4	capacitor	0,04%
	Other	R4	wood	0,70%
	Other	R4	oil	0,00%
	Plastic	R4	plastic	3,66%
<i>Smaltimento termico</i>	Plastic	R4	plastic	0,06%
	Other	R4	waste	0,31%
<i>Incineration Disposal</i>	Plastic	R4	plastic	1,91%
	Other	R4	waste	2,04%
	Glass	R4	glass	0,00%
<b>TOTAL</b>				<b>100,00%</b>

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