Cement & Mortar

Wet cement is normally defined as Non-hazardous Waste but in cases where water has come into contact with cement powder, the water itself can be highly alkaline and therefore considered as Hazardous Waste. Cement powder is one of the main components of concrete. Ordinary Portland Cement (OPC) is the standard, grey cement used for most purposes. There are other types of cement available. For instance, Blue Circle makes special cement for mortar use which appears to be a 50/50 blend of ordinary Portland cement and slaked lime. The lime acts as a plasticizer that reduces the stiffness of the set mortar so that the masonry/brickwork as a whole is more tolerant to movement.

Mortar is composed of sand and cement (and possibly other additives) and is normally considered as Non-hazardous Waste. It is used to build brickwork or blockwork and can be applied as a screed (mortar applied to a floor) or a render (mortar applied to a wall).

Minimise:
The best way to minimise the amount of cement and mortar entering the waste stream is through careful product use. When mixing cement, make up only as much material as is needed for the work to be carried out, minimising residual material that will be disposed of.

Reuse:
Wet cement and mortar will set hard on drying and is therefore difficult to reuse.

Recycle:
Cement and mortar waste occurs on site as a result of material spilt onto the ground or left over mix that has not been used. In these instances, the cement/mortar should be left to dry and once solid placed in the segregated inert skip for recycling along with residues of other concrete and inert products used on site. All inert materials should be sent for recycling and converted into recycled aggregates that can be further used by the construction industry as a resource.

General advice:
- Water that comes into contact with cement powder or workable concrete can be highly alkaline and therefore is defined as hazardous waste.
- Concrete contains chromium, which is polluting to watercourses and groundwater.
- Washout water from trucks and mixers must never enter storm water drains.
- Where possible, store and re-use washout water, allowing the silt to settle.

### Useful figures

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Wastage rate for cement*</td>
<td>10.5% by weight</td>
</tr>
<tr>
<td>Wastage rate for mortar*</td>
<td>7.5% by weight</td>
</tr>
<tr>
<td>SMARTWaste benchmark**</td>
<td></td>
</tr>
<tr>
<td>0.053 tonnes/100m²</td>
<td>(Non-residential projects)</td>
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<tr>
<td>0.079 tonnes/100m²</td>
<td>(Residential projects)</td>
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</tbody>
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Notes.
* Taken from BRE’s Green Guide to Specification
** Based on completed projects on SMARTWaste database – metals category (28th February 2010)

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