Normal Portland Cement is a finely ground powder which is mixed with sand, stone, and water to produce Concrete. For most small jobs* around the home the following proportions (by volume) are recommended:

<table>
<thead>
<tr>
<th>Parts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 part</td>
<td>Portland cement</td>
</tr>
<tr>
<td>2 1/2 parts</td>
<td>concrete sand</td>
</tr>
<tr>
<td>2 1/2 parts</td>
<td>3/4” (19mm) stone</td>
</tr>
<tr>
<td>2 to 3 parts</td>
<td>water [4 1/2 - 5 gallons (20-23 litres) per bag of cement]</td>
</tr>
</tbody>
</table>

The key to quality concrete is the proportion of cement to water used. For this reason, use only as much water as is required to make the mix workable. Any excess water will lower the durability and strength of the hardened concrete. Using these proportions, one bag of cement will produce about 3 1/2 cubic feet (0.1 m3) of concrete mix.

**Curing Concrete**

Concrete develops strength by a chemical process combining cement and water, called hydration. After placing and finishing the concrete should be protected from drying out or freezing. Hydration continues until all cement particles react with water or until cold temperatures slow or stop the chemical reaction.

Curing should take place for a period of 7 days and can be achieved using:

- Polyethylene (plastic) sheeting
- Spray-on curing compounds
- Complete water saturation

* *Exterior flatwork exposed to freezing should be air entrained.*

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