

Drying Wet Crucibles

We aim to deliver crucibles to our customers ready for use, but once they have left our works, we cannot guarantee that they will not pick up moisture between factory and furnace.

Heating a wet crucible will convert the moisture present into a much large volume of steam.

If the heating is too rapid, the steam is evolved too quickly to escape from the crucible body, causing an enormous increase in pressure which will rupture the crucible, or in extreme cases, cause it to explode.

Furthermore, if the rapid heating is caused by pouring molten metal into the wet crucible, then there is the added risk of the molten metal being forcibly expelled.

In most cases, storage in a warm dry atmosphere, followed by slow warming in the furnace before the first heat, is sufficient to remove any small amount of moisture present, but, when the crucible is obviously wet the following procedure is strongly recommended:



The effect of heating a wet crucible too quickly

1. Leave the crucible in a warm, dry atmosphere for at least 24 hours.
2.
 - a. Place the crucibles in a ventilated oven. Raise the temperature slowly and evenly to approximately 200°C over a period of 2 hours. Hold at that temperature for at least a further 1 hour, until all signs of steam emission have ceased.
 - b. Alternatively, raise the temperature slowly and evenly to approximately 120°C over a period of 75 minutes. Hold at that temperature for 8 hours, until all signs of steam emission have ceased.
3.
 - a. With Salamander EXCEL crucibles, the evolution of steam might loosen or detach the low temperature finish. If that is so, remove any loose material with a wire brush and refinish with two coats of either red YMP6 or green YMP2 as appropriate. Make sure the first coat is dry before applying the second.
 - b. With Salamander SUPER crucibles, discolouration or lifting of the black paint is possible. It is unaesthetic, but will not affect the performance.
4. We can supply replacement labels if required.

Detailed instructions for the care and use of crucibles are available on request.

For additional information on MMS' products & services or to find a location nearest to you, please visit:
www.morganmms.com

All dimensions are subject to normal manufacturing tolerances. Molten Metal Systems reserves the right to change specifications at any time.

