Combustion of Magnesium Side Reaction

Our atmosphere is 21% oxygen and 78% nitrogen (1% other gases)

95% of magnesium reacts with oxygen:

magnesium + oxygen → magnesium oxide

Other 5% of magnesium reacts with nitrogen:

magnesium + nitrogen → magnesium nitride

The magnesium nitride in the problem.

Solution: add water and heat!

magnesium nitride + water → magnesium hydroxide + ammonia gas
magnesium hydroxide + heat → magnesium oxide + water

Since both ammonia and water are driven out of the crucible during heating, only magnesium oxide remains (magesium nitride is converted to magnesium oxide