Ionic compounds Names and Solubility

Write the formula for each compound and calculate its molar mass. Is it soluble or insoluble? According to which solubility role?

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| --- | --- | --- | --- | --- |
| Name | Formula | gfm | soluble? | Which solubility rule? |
| potassium sulfate | K2SO4 | 174 | yes | group 1 sulfate rule |
| barium chloride | BaCl2 | 208 | yes | halide |
| barium sulfate | BaSO4 | 233 | no | sulfate rule exception |
| iron (III) chloride | FeCl3 | 162.3 | yes | halide |
| copper (II) sulfate with five waters | CuSO4-5H2O | 249.5 | yes | sulfate rule |
| iron (III) hydroxide | Fe(OH)3 | 107 | no | hydroxide |
| sodium chloride | NaCl | 58.5 | yes | group 1 and halide |
| aluminum hydroxide | Al(OH)3 | 78 | no | hydroxide |
| lead (II) sulfate | PbSO4 | 303.26 | no | sulfate exception |
| aluminum sulfate | Al2(SO4)3 | 342 | yes | sulfate |
| copper (II) nitrate | Cu(NO3)2 | 187.5 | yes | nitrate |
| magnesium bromide | MgBr2 | 184 | yes | halide |
| calcium carbonate | CaCO3 | 100 | no | carbonate |
| sulfuric acid | H2SO4 | 98 | yes | sulfate |