

## Magnesium Sulphate

| Magnesium sulphate dosing may be weight based; ensure accuracy of documented weight before administration |  |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
|---|--|--------------------|---------------|--------------------|---------------|----------------|-------|------|-----------|-----------------|-------|-------|------------|------------------|--------|-------|-------------|
| <b>CAUTION: High Administration Risk Rating</b>   |  |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Form</b>   | 1g (4mmol) per 2mL ampoule (50% w/v) equivalent to 2mmol Magnesium per 1mL   |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Reconstitution</b>   | Already in solution<br><b>MUST be further diluted before administration.</b>   |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Compatibility &amp; Stability</b>  | Sodium Chloride 0.9%<br>Glucose 5%   |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Administration</b>   | <p><b><u>IV Injection</u></b><br/>1-2g (4-8mmol) diluted to 10mL.<br/>Dose typically given over 10 -15 minutes, rate not exceeding 0.6mmol/min.</p> <p><b><u>IV Infusion – preferred method</u></b></p> <p>Max concentration <math>\underline{100\text{mg/mL} = 0.4\text{mmol/mL} = 10\%}</math></p> <p>Infuse via a volumetric infusion device at a rate appropriate to the indication (usually 4–8 mmol/hour). Use lowest possible rate to avoid ADRs</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Dose</th> <th>Volume</th> <th>Dilute in at least</th> <th>Infusion time</th> </tr> </thead> <tbody> <tr> <td>1-2g (4-8mmol)</td> <td>2-4mL</td> <td>50mL</td> <td>1-2 hours</td> </tr> <tr> <td>2-4g (8-16mmol)</td> <td>4-8mL</td> <td>100mL</td> <td>4-12 hours</td> </tr> <tr> <td>4-8g (16-32mmol)</td> <td>8-16mL</td> <td>250mL</td> <td>12-24 hours</td> </tr> </tbody> </table> | Dose               | Volume        | Dilute in at least | Infusion time | 1-2g (4-8mmol) | 2-4mL | 50mL | 1-2 hours | 2-4g (8-16mmol) | 4-8mL | 100mL | 4-12 hours | 4-8g (16-32mmol) | 8-16mL | 250mL | 12-24 hours |
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| 2-4g (8-16mmol)   | 4-8mL  | 100mL              | 4-12 hours    |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| 4-8g (16-32mmol)  | 8-16mL   | 250mL              | 12-24 hours   |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Monitoring</b>   | <ul style="list-style-type: none"> <li>Monitor BP, respiratory rate and urinary output.</li> <li>Use lowest possible rate to avoid bradycardia, flushing and hypotension. Rapid infusion may precipitate hypotension. Monitor for signs of overdose- loss of patellar reflexes, weakness, nausea, sensation of warmth, flushing, drowsiness, double vision, and slurred speech.</li> </ul>   |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Extravasation</b>  | Extravasation is likely to cause tissue damage due to high osmolarity.   |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |
| <b>Additional Information</b>   | <div style="border: 1px solid blue; padding: 5px; margin-bottom: 10px; text-align: center;"> <b>For obstetric patients refer to CUMH guidelines or the Pharmacy Department</b> </div> <ul style="list-style-type: none"> <li>Up to 40g given over a period of 5 days may be necessary, however this is difficult to quantify as up to 50% of an IV dose is excreted in the urine.</li> <li>1 mmol = 2 mEq = 24 mg of elemental magnesium = 240 mg magnesium sulphate</li> </ul>  |                    |               |                    |               |                |       |      |           |                 |       |       |            |                  |        |       |             |

**Information provided relates to Magnesium Sulphate manufactured by Aurum Pharmaceuticals and Ethypharm.**

*This information has been summarised to act as a guide for those administering IV medication. The monograph should be used in conjunction with the drug data sheet and BNF for information on dose, adverse effects, cautions and contra-indications. Further information is available from Pharmacy on 22146 or 22542*