



**Giles Chemical, a division of Premier Chemicals, LLC.**  
**102 Commerce Street Waynesville, NC 28786**  
**Tech Certificate of Analysis**

5/14/2009

CUSTOMER: \_\_\_\_\_

CUST. REF: \_\_\_\_\_ SHIP DATE: \_\_\_\_\_

PRODUCT: Magnesium Sulfate - Tech TRAILER NUMBER: \_\_\_\_\_

SHELF LIFE: 3 Years BILL OF LADING # : \_\_\_\_\_

LOT NUMBER: **0709** PO NUMBER # : \_\_\_\_\_

SHIPPER : \_\_\_\_\_ MANUFACTURED : \_\_\_\_\_

CUST. SERV. : \_\_\_\_\_

I, certify that this material meets all the requirements of the Giles Chemical sales specification and the United States Pharmacopeia 31. Periodic testing has shown the samples to be consistently free of volatile organic impurities. Giles Chemical manufactured under the guidelines of Good Manufacturing Practices ( GMP )

**EPSOM SALT, Magnesium Sulfate - Heptahydrate, Tech Grade**

| METHOD | TEST                                  | LOWER | UPPER  | Test Results |
|--------|---------------------------------------|-------|--------|--------------|
| VISUAL | Appearance                            | ~~    | ~~     | Clear        |
|        |                                       |       |        |              |
| USP31  | Chloride as Cl (%)                    | ~~    | 0.014  | <.001%       |
|        |                                       |       |        |              |
| USP31  | Ignition Loss (%)                     | 40.00 | 52.00  | 51.16%       |
|        |                                       |       |        |              |
| USP31  | MgSO <sub>4</sub> ( Anhydrous wt. % ) | 99.00 | 100.50 | 99.62%       |
| USP31  | MgSO <sub>4</sub> ( As is basis, % )  | 48.30 | 52.00  | 48.61%       |
| USP31  | pH 5% Solution                        | 5.00  | 9.20   | 6.20         |
|        |                                       |       |        |              |
| USP31  | Mg <sup>2+</sup> ID                   |       |        | Present      |
| USP31  | SO <sub>4</sub> <sup>2-</sup> ID      |       |        | Present      |

ATTN:

ANALYST:

SIGNATURE ON FILE