

## TECH - CERTIFICATE OF ANALYSIS

|               | 4/28/2011                | _                 |  |
|---------------|--------------------------|-------------------|--|
| CUSTOMER:     |                          |                   |  |
| CUST. REF:    |                          | SHIP DATE:        |  |
| PRODUCT:      | Magnesium Sulfate - TECH | TRAILER NUMBER:   |  |
| SHELF LIFE:   |                          | BILL OF LADING #: |  |
| LOT NUMBER:   | 0511                     | PO NUMBER # :     |  |
| SHIPPER:      |                          | MANUFACTURED :    |  |
| CUST. SERV. : |                          |                   |  |
|               |                          |                   |  |

I, certify that this material meets all the requirements of the PQ Corporation sales specification 606311

Magnesium Sulfate - Heptahydrate, Agricultural Grade; CAS Registry #: 10034-99-8

| METHOD | TEST                                  | LOWER | UPPER  | Test Results |
|--------|---------------------------------------|-------|--------|--------------|
| VISUAL | Appearance                            | ~~    | ~~     | Clear        |
| USP34  | Chloride as CI (%)                    | ~~    | 0.014  | .002%        |
| USP34  | Ignition Loss (%)                     | 40.00 | 52.00  | 51.48%       |
| USP34  | MgSO <sub>4</sub> ( Anhydrous wt. % ) | 99.00 | 100.50 | 99.26%       |
| USP34  | MgSO <sub>4</sub> ( As is basis, % )  | 48.30 | 52.00  | 48.44%       |
| USP34  | pH 5% Solution                        | 5.00  | 9.20   | 6.24         |
|        |                                       | 2.00  | 2.20   |              |

ATTN: ANALYST:

SIGNATURE ON FILE

PQ - CORPORATION - UTICA, IL

(815) 667-4241