

February 2, 2011

MAGNESOL<sup>®</sup> is a registered trademark of The Dallas Group of America, Inc. for a synthetic, amorphous, hydrous form of magnesium silicate. This product is manufactured to meet the specifications for synthetic magnesium silicate of the Food Chemicals Codex VII, the National Formulary 27, the FAO/WHO JECFA Specifications for Identity and Purity<sup>1</sup>, and EU Commission Directive 2008/84/EC of 27 August 2008. Table 1 is a summary of the analyses performed by three independent laboratories which verify conformance of MAGNESOL<sup>®</sup> XL to published specifications.

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**Table 1: Chemical Composition for MAGNESOL®, synthetic magnesium silicate:**

| Table of Specifications          | Food Chemicals Codex VII <sup>a</sup>                                     | European Union Directive <sup>b</sup> | FAO/WHO JECFA <sup>c</sup> 553 | DGA Typical Analysis | IFSC Analysis <sup>d</sup> | Environmental Consultants Analysis <sup>d</sup> | Central Analytical Laboratories <sup>d</sup> |
|----------------------------------|---------------------------------------------------------------------------|---------------------------------------|--------------------------------|----------------------|----------------------------|-------------------------------------------------|----------------------------------------------|
| MgO (ignited basis)              | Not less than 15.0%                                                       | Not less than 15.0%                   | Not less than 15.0%            | 19.5%                | 19.0%                      | 17.9%                                           | 19.7%                                        |
| SiO <sub>2</sub> (ignited basis) | Not less than 67.0%                                                       | Not less than 67.0%                   | Not less than 67.0%            | 77.5%                | 80.0%                      | 81.1%                                           | 78.3%                                        |
| Loss on drying (as packaged)     | Not more than percentage stated or within the range claimed by the vendor | Not more than 15.0%                   | Not more than 15.0%            | 12.5%                | 12.3%                      | 13.5%                                           | 12.3%                                        |
| Loss on Ignition (dry basis)     | Not more than percentage stated or within the range claimed by the vendor | Not more than 15.0%                   | Not more than 15.0%            | 10.7%                | 9.3%                       | 11.9%                                           | 12.0%                                        |
| Soluble salts                    | Not more than 3.0%                                                        | Not more than 3.0%                    | Not more than 3.0%             | 1.2%                 | 0.52%                      | Not tested                                      | 2.2%                                         |
| Free alkali (as NaOH)            | Not more than 1%                                                          | Not more than 1%                      | Not more than 1%               | 0.01%                | 0.002%                     | Not tested                                      | 0.02%                                        |
| Arsenic (as As)                  | No specification                                                          | Not more than 3 mg/Kg                 | No specification               | Passes limit test    | < 0.01 mg/Kg               | < 0.5 mg/Kg                                     | Not tested                                   |
| Lead (as Pb)                     | Not more than 5 mg/Kg                                                     | Not more than 5 mg/Kg                 | Not more than 5 mg/Kg          | Passes limit test    | 0.15 mg/Kg                 | < 0.1 mg/Kg                                     | Not detected                                 |
| Mercury (as Hg)                  | No specification                                                          | Not more than 1 mg/Kg                 | No specification               | Passes limit test    | Not tested                 | Not tested                                      | Not tested                                   |
| Fluoride                         | Not more than 10 mg/Kg                                                    | Not more than 10 mg/Kg                | Not more than 10 mg/Kg         | Passes limit test    | 0.13 mg/Kg                 | Not tested                                      | Not detected                                 |

- a. The *Food Chemicals Codex* was officially recognized by the US Food and Drug Administration (FDA) when the definitions and procedural and interpretive regulations under §170.30, relating to eligibility of substances for classification as generally recognized as safe (GRAS), were revised and published in the Federal Register of June 25, 1971 (36 CFR 12093). In the preface to the Third Edition, the Codex further states, “*Food Chemical Codex* specifications have been adopted, under certain conditions, by the National Health and Medical Research Council of Australia; the Health Protection Branch of the Department of National Health and Welfare of Canada; the Ministries of Agriculture, Fisheries, and Food of Great Britain; and the Department of Health (Food and Nutrition Branch) of New Zealand.
- b. The European Union has assigned the number E553a(i) to synthetic magnesium silicate. The specifications are found on page 137 of Commission Directive 96/77/EC of 2 December 1996 laying down specific purity criteria on food additives other than color and sweeteners.
- c. Section 5.1 of the Codex Alimentarius, Volume 1, General Requirements, 1991, states that the International Numbering System (INS) designation for synthetic magnesium silicate is 553. FAO/WHO JECFA\* specifications for identity and purity of synthetic magnesium silicate are found in the FAO Food and Nutrition Paper 61st Session, published in NFP 52, Add 11, 2003.

\* Food and Agriculture Organization, World Health Organization Joint Expert Committee on Food Additives

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