

Title: PurforMSM® Flake
 Item Number: 30020

Doc.#: 824-01-406 Rev.: 4.2

Effective Date: 8/30/17

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1. **Description:** PurforMSM® is a white flake
 - 1.1. **Product name:** PurforMSM® (MSM, Methylsulfonylmethane)
 - 1.2. **Chemical name:** Dimethyl Sulfone
 - 1.3. **Synonyms:** Methyl Sulfone, DMSO₂
 - 1.4. **Chemical Abstract Registry No. (CAS No.):** 67-71-0
 - 1.5. **Molecular Weight:** 94.13
 - 1.6. **Percent Sulfur:** 34.1%

2. **Product Information:**
 - 2.1. **Appearance:** White flake
 - 2.2. **Excipient:** None
 - 2.3. **GMO:** No GMO are present in the finished product or in any of the ingredients.
 - 2.4. **BSE:** PurforMSM® is BSE free.
 - 2.5. **Allergen:** PurforMSM® does not contain any allergens and no allergens are processed in the same facility.
 - 2.6. **EU Regulatory Status:** Complies with the EU definition of "Feed Material" per Commission Regulation 575/2011, Section 13.9.1.
 - 2.7. **Harmonized Tariff code:** 2930909190

3. **Analytical Specifications:** (1. Third party laboratory validated method.)

| | Method | Specification |
|-------------------------------------|-------------------------|----------------------|
| 3.1. Physiochemical | | |
| Volatile Purity | MSM-GC/FID ¹ | >99.8% |
| Melting Point | USP/NF <741> | 109.5 °C ± 1.0 °C |
| Water Content | USP/NF <9211a> | < 0.1% |
| DMSO Content | MSM-GC/FID ¹ | <0.05% |
| 3.2. Microbiological | | |
| Total Aerobic Microbial count | USP<61> | <10 cfu/g |
| Total Yeast and Mold counts | USP<61> | <10 cfu/g |
| Enterobacteria | USP<62> | Absent |
| Escherichia coli | USP<62> | Absent |
| Salmonella | USP<62> | Absent |
| Staphylococcus aureus | USP<62> | Absent |
| 3.3. Sieve, Bulk Tap Density | | |
| Sieve (U.S. Sieve Designation) | USP/NF <786I> | |
| 12 | | NLT 98% Through |
| Bulk Density | USP/NF <6161> | NLT 0.68 g/ml |
| Tap Density | USP/NF <6161> | NLT 0.78 g/ml |

4. **Manufacturing Facility:** The manufacturing process takes place in the USA.
 - 4.1. FDA cGMP compliant
 - 4.2. ISO 9001 certified
 - 4.3. FSSC 22000 certified

5. **Packaging:** PurforMSM® flake is packaged in 20kg boxes.
 - 5.1. **Cardboard box:** 13 ½"D X 11" W X 12 ½" H
 - 5.2. **Liner:** Food grade PE bag
 - 5.3. **Bag closure:** zip tie or tape
 - 5.4. **Fill Weight:** 20kg +/- 0.25kg

6. **Labeling:** Each container will be labeled with a 6" x 8" label that contains the following information:
- 6.1.1. Product description
 - 6.1.2. Net weight, gross weight, container weight
 - 6.1.3. Sequential box number
 - 6.1.4. Bergstrom item number
 - 6.1.5. Lot number
 - 6.1.6. Expiration date
 - 6.1.7. Manufactures address and phone number
7. **Storage and Handling:** MSM should be stored at ambient temperatures.
8. **Expiration Date:** 5 years from production date.

Quality Approval *Saul Smart* Date: *5-7-2018*