Magnesium sulfate is an inorganic salt containing magnesium, sulfur and oxygen, with the chemical formula MgSO₄. Uniquely, this product exhibits heat generating properties and is highly soluble in water. The heat generating performance and water absorbency of MgSO₄ products is due to an exothermic reaction mechanism between MgSO₄ and water. The degree of sensation felt in formulation is dependent on the concentration of the MgSO₄ used and the desired effects sought by the formulator.

This product appears as an irregular shaped, white powder with an average particle size of 10.5 microns. Also, this is a USP grade material. This product can be used as a heat generating agent in a variety of anhydrous systems such as scrubs, gels, and lotions. Systems must be anhydrous since the chemical reaction is immediately initiated when the product is introduced to water.

### Thermal Facial Scrub with 25% Magnesium Sulfate

**Formula KCL-009A**

**Part 1**
- Lipo Polyglycol® 400 - Lipo Chemicals: 58.65%
- Lipocol® S - Lipo Chemicals: 3.00%
- Lipocol® C - Lipo Chemicals: 2.00%
- Lipocol® L-23 - Lipo Chemicals: 1.00%
- Hostapon® CT Paste - Clariant: 1.50%

**Part 2**
- USP MAGNESIUM SULFATE, ANHYDROUS - Tomita/Kobo Products: 25.00%
- Unilube 75DE-2620R - NOF Corporation: 5.00%
- CL-2507 - Kobo Products: 3.00%
- L-HPC - Shin Etsu: 0.40%
- Propyl Paraben NF - International Sourcing: 0.20%
- Methyl Paraben NF - International Sourcing: 0.10%

**Part 3**
- SW30B1A - Kobo Products: 0.15%
- Synthetic Wax (And) Blue 1 Lake (And) Isopropyl Titanium Trisostearate: 0.01%

**Manufacturing Procedure**
1. Combine Part 1 and heat to 60°C while mixing.
2. Cool and then add Part 2 while mixing.
3. Add Part 3 while mixing.

**Description**
This is an anhydrous thermal face scrub that warms upon contact with water due to the inclusion of 25% Magnesium Sulfate. CL-2057 provides exfoliation in the form of polyethylene scrubbing beads. SW30B1A gives a light blue color to the formula.