

# USP Magnesium Sulfate, Anhydrous



## Warming Agent for Anhydrous Systems

**Magnesium sulfate** is an inorganic salt with the chemical formula  $MgSO_4$ . It is highly soluble in water and its dissolution is an exothermic reaction: heat is given off. This property is used in personal care products to give a warm feel when the product containing  $MgSO_4$  is applied to the skin and water is added. The degree of sensation felt in formulation is dependent on the concentration of the  $MgSO_4$  used and the

desired effects sought by the formulator.

This USP grade material appears as a white powder with an average particle size of 10 microns. It 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.



KCL-020-BR

### Exfoliating Warming Mask

#### Part 1

- Tegosoft® CT - Evonik: *Caprylic/Capric Triglyceride* 18.00%
- KF-6017 - Shin-Etsu: *PEG-10 Dimethicone* 12.00%
- SALACOS® 334 - Ikeda/Kobo Products: *Caprylic/Capric/Myristic/Stearic Triglyceride* 8.00%
- SunBoost ATB - Kobo Products: *Argania Spinosa Kernel Oil (And) Tocopheryl Acetate (And) Bisabolol* 8.00%
- BLACK NF-11S2 - Kobo Products: *Iron Oxides (CI 77499) (And) Triethoxycaprylylsilane* 2.00%
- PM WAX 82 - Kobo Products: *Polyethylene (And) Microcrystalline Wax* 1.00%

#### Part 2

- BTS-CO1 - Kobo Products: *Talc (And) Isopropyl Titanium Triisostearate* 5.00%
- GMS-I2 - Kobo Products: *Mica (And) Isopropyl Titanium Triisostearate* 4.00%
- MSS-500/3H - Kobo Products: *Silica* 2.00%

#### Part 3

- USP MAGNESIUM SULFATE, ANHYDROUS - Kobo Products: *Magnesium Sulfate* 30.00%
- Geropon® T-77 - Solvay: *Sodium Methyl Oleoyl Taurate* 10.00%



#### Manufacturing Procedure

1. Heat Part 1 to 85°C and mix until complete dispersion of the pigment.
2. Add Part 2 and mix until it becomes homogeneous.
3. Cool to 60°C and add Part 3 slowly while mixing.
4. Pour into components while it is still hot.

#### Description

This warming mask features **USP MAGNESIUM SULFATE, ANHYDROUS**, an inorganic salt that exhibits heat-generating properties when water is added, due to an exothermic reaction mechanism. SALACOS® 334, a replacement for Shea Butter, acts as a moisturizing agent. BLACK NF-11S2 gives an intense black color. PM WAX 82 is a combination of waxes that helps to increase formula viscosity. BTS-CO1 and GMS-I2 act as fillers helping with creamy feel. MSS-500/3H, a silica microsphere, absorbs the excess oil, forming a gel and increasing formula viscosity. SunBoost ATB is a proprietary ratio of antioxidant, anti-irritant and anti-inflammatory agents.

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KCL-009C

## Thermal Facial Cleanser

### Part 1

● Lipo Polyglycol® 400 - Vantage: <i>PEG-8</i>	61.65%
● Lipocol® S - Vantage: <i>Stearyl Alcohol</i>	3.00%
● Lipocol® C - Vantage: <i>Cetyl Alcohol</i>	2.00%
● Hostapon® CT Paste - Clariant: <i>Sodium Methyl Cocoyl Taurate</i>	1.50%
● Lipocol® L-23 - Vantage: <i>Laureth-23</i>	1.00%

### Part 2

● <b>USP MAGNESIUM SULFATE, ANHYDROUS</b> - Tomita/Kobo Products: <i>Magnesium Sulfate</i>	25.00%
● Unilube 75DE-2620R - NOF Corporation: <i>PEG/PPG-240/60 Copolymer</i>	5.00%
● L-HPC - Shin Etsu: <i>Hydroxypropylcellulose</i>	0.40%
● Propyl Paraben NF - International Sourcing: <i>Propylparaben</i>	0.20%
● Methyl Paraben NF - International Sourcing: <i>Methylparaben</i>	0.10%
● <b>SW30B1A</b> - Kobo Products: <i>Synthetic Wax</i> (And) <i>Blue 1 Lake</i> (And) <i>Isopropyl Titanium</i> <i>Triisostearate</i>	0.15%

### Manufacturing Procedure

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

### Description

This is an anhydrous thermal face cleanser that warms upon contact with water due to the inclusion of 25% **USP MAGNESIUM SULFATE, ANHYDROUS**. SW30B1A gives a light blue color to the formula.