

Antiperspirant Gel Powder Stick

Formula KAP-001

Kobo Products - formulations

| Part | Percent | Ingredients | INCI Name | Supplier |
|----------|---------|-----------------------------|--------------------------------------------------------------------------|--------------------------------|
| 1 | 10.05 | SF1202 | Cyclopentasiloxane | Momentive/Kobo Products |
| | 7.50 | ELEMENT14 PDMS 50 | Dimethicone | Momentive/Kobo Products |
| | 0.10 | Propyl Paraben NF | Propylparaben | International Sourcing |
| 2 | 12.50 | SF1528 | Cyclopentasiloxane (And) PEG/PPG-20/15 Dimethicone | Momentive/Kobo Products |
| | 5.00 | MSS-500W | Silica | Kobo Products |
| | 5.00 | ASO-I2 | Aluminum Starch Octenylsuccinate (And) Isopropyl Titanium Triisostearate | Kobo Products |
| | 2.50 | TOSPEARL 2000B | Polymethylsilsesquioxane | Momentive/Kobo Products |
| 3 | 10.00 | Glycerin U.S.P. Natural 96% | Glycerin | Univar USA Inc. |
| | 0.25 | Tween™ 80 | Polysorbate 80 | Croda |
| | 0.10 | Methyl Paraben NF | Methylparaben | International Sourcing |
| 4 | 20.00 | Zirkonal AP 4 G | Aluminum Zirconium Tetrachlorohydrate-Glycine | BK Giulini Corp. |
| | 17.50 | Deionized Water | Water | |
| 5 | 5.00 | Syncrowax HGL-C | C18-36 Triglycerides | Croda |
| | 2.50 | Castorwax MP-80 | Hydrogenate Castor Oil | CasChem |
| | 2.00 | Syncrowax BB-4 | Synthetic Beeswax | Croda |
| 100 | | | | |

Manufacturing Procedure

Use explosion-proof mixers and equipment during batching process

1. Add Part 1 raw materials to main tank (SS 1200 ml beaker) under a fume hood.
2. Mix until homogenous using a homogenizer.
3. Add the powder mixture to Part 1 and homogenize for 15 minutes.
4. Combine the Methylparaben and Glycerin. Stir until dissolved.
5. Combine the water and Zirkonal to form the salt solution.
6. Combine Parts 3 and 4 to form the aqueous phase. Add the aqueous Parts 3 and 4 very slowly to Silicone powder Parts 1 and 2 with mixing (Homogenizer: 3,500rpm). Increase to 7000 rpm as viscosity builds. Add a water bath.
7. Continue to homogenize the batch for 15 minutes. (Homogenizer: 7,000 rpm.)
8. Heat batch to 77-80°C. Make sure top is covered with aluminum foil. Internal heat is generated via mixing that will produce temperatures in excess of 75°C.
9. Add Part 5 to the batch at 75-80°C. Continue to homogenize for 5 minutes. Q.S solvent SF1202.
10. Mold into appropriate stick containers. Cool in refrigerator for 15 minutes.

Description

This antiperspirant incorporates an ITT-Treated starch, ASO-I2, along with Silica microspheres that work in synergy with the active Zirkonal to keep the underarm dry. Tospearl 2000B contributes superior glide-on application properties. The SF1528 emulsifier is used to form the W/O emulsion and ELEMENT14 PDMS 50 gives excellent slip. SF1202 is used to give playtime and a non-greasy drydown.

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Formulations

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The Powder & Dispersion Specialist

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