

Boron Nitride Powders for Japan Quasi - Drug Cosmetics and Skin Care Products

Achieving the perfect balance in the way a cosmetic product affects our senses, flows through a process and costs, are the formulator's challenge. TRÈS BN powders work in synergy with many other materials to achieve this balance. Whether it's the shimmer of an eye shadow, the coverage in a foundation, or higher yield in the extrusion process, TRÈS BN® powders offer formulators many solutions wrapped into one material.

Hexagonal boron nitride (hBN) is a synthesis of Borax (natural mineral) and a Nitrogen source at high temperature resulting in a lamellar structure that resembles graphite, except pure hBN is white. TRÈS BN Cosmetic Powders are Ultra-High Purity (UHP) versions of this lamellar form with each layer or cleavage face containing boron and nitrogen. There is no B-N bonding between layers and therefore planes slide over one another, creating a soft and lubricating effect.

TRÈS BN JAPAN APPROVED BORON NITRIDE POWDERS

TRÈS BN cosmetic grades PUHP1010J, PUHP3008J and PUHP1109J are ultra-purity boron nitride powders that have been certified by the Japan Food Research Laboratory as having met the Japan Quasi-Drug raw material specification for boron nitride.

A BEAUTIFUL ALTERNATIVE

Each TRÈS BN grade has unique properties that are associated with crystal size, morphology, and surface characteristics but all are soft, smooth and adherent. TRÈS BN powders may be used as a major stand-alone component in pressed and loose powders, or as minor additive to any formulation for improved texture, enhanced luminosity, decreased tack and increased pick-up and play-time in skin creams. In formulations where talc, mica or bismuthoxychloride are undesirable or fall short on performance, TRÈS BN powders offer a perfect alternative.



Features/Benefits

- Lamellar crystal structure improves texture, slip, payoff, spreadability and adherence
- Low coefficient of friction provides smooth and silky feel, aids compressibility of pressed powders
- Decreases tack by absorbing excess oils
- Chemically inert and stable
- Finely divided particle size distributions
- Comply with Japan Quasi-Drug raw material specification for boron nitride

Key Applications

- Foundation and liquid makeup
- Concealers, BB Cream
- Loose and pressed powder
- Lipstick
- Pencils
- Nail enamel
- Sunscreen and moisturizers

Target Markets

- Color cosmetics
- Skin care and personal care

| Specifications | Method | PUHP 3008J | PUHP 1109J |
|------------------------------------|------------------|---|--|
| Crystal Structure | XRD | Hexagonal | Hexagonal |
| Boron Nitride (%), min | Mass Balance | 95.0 | 95.0 |
| Water soluble substances (%), max. | Chemical | 0.3 | 0.3 |
| | Chemical | 20 | 20 |
| Oxygen* | ICP | 2 | 2 |
| B ₂ O ₃ * | ICP | 20 | 20 |
| Hg* | pH meter | 5.0 - 8.0 | 5.0 - 8.0 |
| As* | Thermal | 4.0 | 4.0 |
| Pb* | Thermal | 0.5 | 0.5 |
| Tap Density* | Bulk Density | 0.1 - 0.4 | 0.1 - 0.4 |
| Particle Size (d ₅₀)* | Laser Micro-trac | 6 - 10 | 10 - 14 |
| Screen (-400 US mesh)* | % | 99.9 | 99.9 |
| Appearance | | Thicker platelets; gentle curved edges for semi-opaque and matte appearance | Optically transparent through basal plane for sheer and natural looking coverage |

TRADE INFORMATION

| | |
|----------------|-----------------------|
| Trade Name | TRÈS BN® |
| INCI Name | Boron Nitride |
| JCIC code | 523146 |
| EINECS Number | 233-136-6 |
| CAS No. | 10043-11-5 |
| REACH Ref. No. | 17-2119680038-36-0000 |

TOXICOLOGY

TRÈS BN Cosmetic Powders have had product safety evaluations conducted by an independent laboratory and were determined to be completely safe for cosmetic use in all parts of the world. Boron Nitride powders are inert and non-toxic. Please refer to the MSDS available at www.tresbn.com for further information.

STORAGE RECOMMENDATIONS

TRÈS BN powders are expressly manufactured for cosmetic use. The proprietary methods used in their manufacture ensure final powders that are of the highest purity. When stored with a desiccant in cool, humidity controlled conditions, TRÈS BN powders will remain fresh up to 24 months after date of shipment.

For further information, please contact your TRÈS BN specialist at bnsales@saint-gobain.com.



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