



### Boron Nitride Powders for Color Cosmetics and Skin Care

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.

#### WHAT IS TRÈS BN ?

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.

- Lamellar crystal structure
- Refractive Index 1.74
- Transparent through basal plane
- Thermally Conductive
- Density 2.26 g/cc
- Low Coefficient of Friction < 0.3
- Chemically inert and stable

#### A BEAUTIFUL ALTERNATIVE

Each TRÈS BN grade has unique properties that are associated with crystal size, morphology, and surface characteristics. Crystalline platelets, from 2 to 30 microns, each grade within this range has a different appearance from matte to shiny, 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

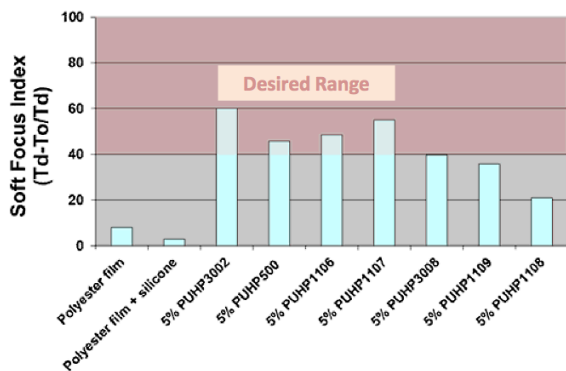
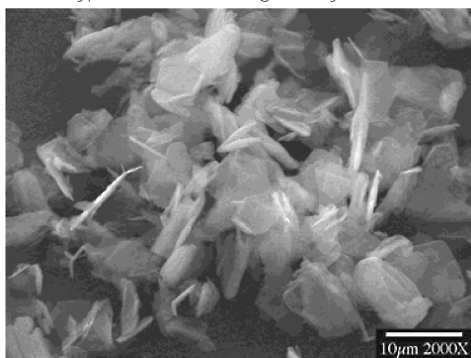
- Foundation and liquid makeup
- Concealers, BB Cream
- Loose and pressed powder
- Lipstick
- Pencils
- Nail enamel
- Sunscreen and moisturizers

#### Target Markets

- Color cosmetics
- Skin care and personal care

Part Number	Chemistry				Particle Size Distribution					Other Physical	
	BN %	O <sub>2</sub> %	B <sub>2</sub> O <sub>3</sub> %	Hg, As, Pb ppm	mV µm	D10 µm	D50 µm	D90 µm	Max. µm	Tap Density g/cc	Surface Area m <sup>2</sup> /g
PUHP3002	98.8	1.2	0.05	<1	2	1	2	4	11	0.2	15
PUHP500	99.5	0.4	0.02	<1	6	4	6	11	22	0.4	7
PUHP3008	99.5	0.5	0.02	<1	10	4	8	18	44	0.5	4
PUHP1109	99.6	0.4	0.02	<1	13	5	12	22	52	0.5	3.5
PUHP3016	99.6	0.4	0.02	<1	18	7	16	31	74	0.6	2
PUHP3016	99.8	0.2	0.02	<1	31	11	30	49	103	0.6	1

SEM of typical TRÈS BN hexagonal crystals



### 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](http://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.



### Saint-Gobain Boron Nitride

168 Creekside Dr.  
Amherst NY 14228

T: 1 877 691 2001 (Toll free)

T: 1 716 691 2000

F: 1 716 691 2090

email: [BNSales@saint-gobain.com](mailto:BNSales@saint-gobain.com)  
[bn.saint-gobain.com](http://bn.saint-gobain.com)

[bn.saint-gobain.com](http://bn.saint-gobain.com)

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