

TRÈS BN®

Boron Nitride Cosmetic Powders

Trade name TRÈS BN®
INCI Name Boron Nitride
JCIC code 523146
EINECS Number 233-136-6
CAS No. 10043-11-5
REACH Ref. No. 05-2117955606-33-0000

Achieving the perfect balance in how the final product affects our senses lasts, flows through a process and costs, is the formulators challenge. TRÈS BN powders are not only soft, but 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 your 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.

A Beautiful Alternative

Each TRÈS BN® grade has unique properties that are associated with crystal size, morphology, and surface characteristics. From sub-micron crystals to 50 micron platelets, each grade within this range has a different appearance from matte to shiny, but all are soft, smooth and adherent. Furthermore, TRÈS BN® is a dielectric ceramic powder that remains on the skin's surface, offering a transparent and photo-stable layer of protection for skin care actives.

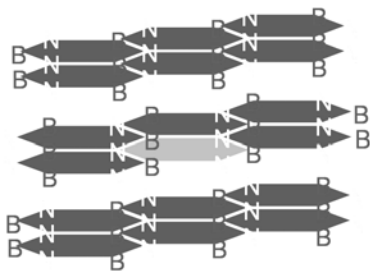


Fig. 1 – Hexagonal BN Crystal Structure

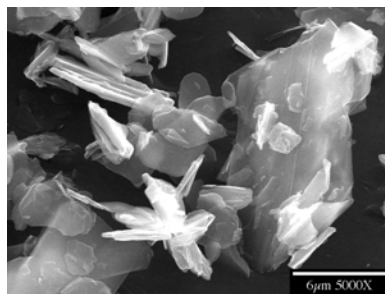


Fig. 2 – Typical SEM of TRÈS BN

Product Overview



General Properties of TRÈS BN Powders

Crystal Structure	Hexagonal
BN	99 + %
Heavy metals	< 1 PPM
pH	6 – 8
Particle Size	Grades from < 1 µm to > 50 µm
Refractive index	1.74
Coefficient of Friction	< 0.3
Dielectric Constant	3 - 4
Theoretical Density	2.26 g / cm ³
Molecular Weight	24.86
Appearance	White, photo-stable and odorless powder
Texture	Soft, slippery, smooth

FUNCTIONS

- ✓ Texturizing agent
- ✓ Improves spreading and adherence
- ✓ Oil absorbent- decreases tack
- ✓ Improves coverage and opacity (grades <8 µm)
- ✓ Increases luminosity (grades > 12 µm)



Saint-Gobain Advanced Ceramics
Boron Nitride Products
 168 Creekside Drive
 Amherst, NY 14228-2027
 Tel: (716) 691-2052
 Fax: (716) 691-2090

www.TRESBN.com

The information, recommendations and opinions set forth herein are offered solely for your consideration, inquiry and verification and are not, in part or total, to be construed as constituting a warranty or representation for which we assume legal responsibility. Nothing contained herein is to be interpreted as authorization to practice a patented invention without a license.

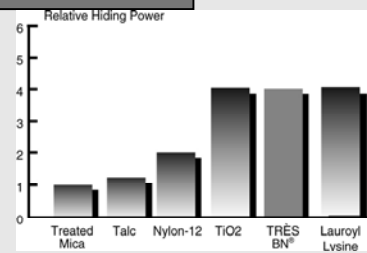
TRÈS BN® is a registered trademark of Saint-Gobain Advanced Ceramics.

© 2009 Saint-Gobain Advanced Ceramics

Effective 01/09

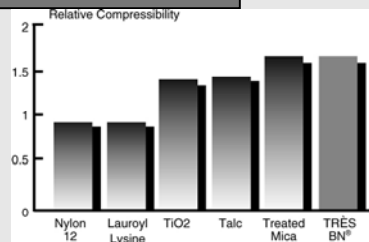
Document# TRESBN2009

Hiding Power*



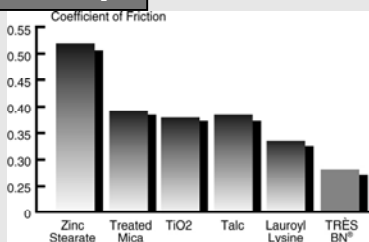
The whiteness of the crystals permits low micron sized powders to act as pigments. Their high surface area provides bonding sites for liquid carriers, providing excellent coverage and hiding power.

Compressibility*



Flat platelets allow for excellent compaction eliminating the need for compacting additives such as stearates.

Lubricity*



Scientific testing shows Très BN powder offers lower coefficients of friction than traditional cosmetic powders such as talc, resulting in a more lubricious feel and silky texture

*The above tests were performed on PUHP500.

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.bn.saint-gobain.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.