



February 17, 2009

To Whom It May Concern:

Balance™ Barrier with GreenShield textile finish from TSG, Incorporated has been assessed by MBDC (McDonough Braungart Design Chemistry) and found to be eligible to be applied to a Cradle to Cradle SILVER certified fabric based on the formulations disclosed to MBDC in January 2009

TSG, Inc. engaged MBDC to perform a Cradle to Cradle™ assessment of this product. This work was intended to evaluate this Balance™ product on human and ecological health during all phases of the lifecycle. The MBDC science team evaluated all components of this Balance™ product down to the 100 ppm (0.01%) level based on the Cradle to Cradle™ Design philosophy, created by William McDonough and Michael Braungart—the co-founders and principals of MBDC. This design theory examines the human and ecological health characteristics and lifecycle attributes of product components to identify current design issues and areas for future optimization

Based on this collaboration with MBDC, it is clear that this TSG Balance™ Barrier with GreenShield product is on the path to becoming an ecologically intelligent fabric finish.

Sincerely,

Howie Fendley
Senior Scientist and Business Development Manager
MBDC, LLC



From our Defend™ family of high performance treatments, we are pleased to introduce **balance™ Barrier with GreenShield™ (LC40)**. An Eco-friendly high performance textile application system that includes GreenShield™ technology, breathable moisture barrier, abrasion enhancer, anti-microbial, flame retardant, and is bleach cleanable.

- **GreenShield™** topical water/stain repellent utilizing next generation nanotechnology. Contains 8 times less fluorocarbon than the nearest competitor and has achieved the SCS Indoor Advantage™ **GOLD** certification and has been uniquely granted the SCS Low Fluorocarbon certification. www.greenshieldfinish.com
- **Anti-microbial** utilizing chitosan technology, an abundant and replenishable natural resource safe for the environment which inhibits growth of bacteria, fungi, mold and mildew. Passes the MRSA test, as well as AATCC 30 & AATCC 147 test methods. www.bacshield.org
- **Moisture Barrier** is super soft and breathable. Passes the AATCC 127 “Hydrostatic Head” test.
- **Flame Retardant** is non-halogenated and built into the moisture barrier. Has been found to pass California TB-133 upholstery flame test.
- **Cleanability** properties allow for solvent spot cleaning and bleach cleaning in addition to normal soap/water solutions. Passes the AATCC 130 cleaning test method.
- **Eco-friendly** technology has permitted balance™ Barrier with GreenShield™ to be the ONLY positively assessed moisture barrier system by MBDC making it eligible for the **SILVER** C2C certification.
- **Abrasion** enhancement is designed to improve Wyzenbeek results. Has been found to exceed 100,000 double rubs.
- **Cut Yardage** can be finished with balance™ Barrier with GreenShield™. Pieces as small as 10 yards will be treated and turned around in 7-10 business days.
- **Re-Cycle Program** allows for previously finished fabrics to be topcoated with LC40. Fabrics do NOT have to be loomstate. This provides multiple options on the same material without having to re-order or re-weave.

Pre-testing is advised as different fabric constructions may yield different results. Lab samples can be turned around within 48 hours. Full production samples can be processed within 7-10 business days.

For more information, visit our website at www.balancefinishing.com