EcoShield® Barrier Coating for Paper and Corrugated
Environmentally friendly replacement for polyethylene and wax paper coatings

PRODUCT DESCRIPTION
EcoShield® Barrier Coating is a water borne barrier coating that is recyclable and 100% repulpable, effectively eliminating the need to use traditional wax and polyethylene papers. In addition, the coating can be utilized on kraft and recycled paper to seal the surface from contaminants that could cause corrosion. The combination of a contaminant sealant and a repulpable coating for kraft paper makes EcoShield® Barrier Coating a pioneer in the packaging industry. This material can also be used as a coating on liners for corrugated boxes providing a waterproof moisture barrier. EcoShield® Barrier Coating also gives excellent oil and grease resistance.

Historically, polyethylene and wax coatings have been used to seal porous paper, corrugated boxes, and sheets to provide a moisture barrier and/or moisture-vapor barrier to these substrates. The resulting paper product is an environmental problem and cannot be recycled through normal channels.

TYPICAL APPLICATIONS
EcoShield® Barrier Coating can be applied by most common paper roll coaters, including gravure, flex, air-knife, reverse-roll, etc. Drying temperature is 180°-200°F (82°-93°C). Suggested weights are 8-11 lb/ream (3000 sq.ft.) (13-18 g/m²).

FEATURES
- Very low Moisture Vapor Transmission Rate (MVTR), comparable to that of polycoted or waxed paper
- Excellent oil and grease resistance (3M kit value of 12)
- Fully recyclable (repulpable)
- Non-toxic, environmentally friendly
- Complies with FDA regulations under 21 code of Federal Regulations:
  - 176.170-Components of paper and paperboard in contact with aqueous and fatty foods
  - 176.180-Components of paper and paperboard in contact with dry food

Note: Coated papers will produce better physical properties such as burst, tear, tensile strength, elongation, folding endurance, coefficient of friction, and smoothness.

TYPICAL PROPERTIES

<table>
<thead>
<tr>
<th>EcoShield® Barrier Coating</th>
<th>Milky White to off white viscous liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-volatile content</td>
<td>45-49%</td>
</tr>
<tr>
<td>pH</td>
<td>9.3-10.3 (Neat)</td>
</tr>
<tr>
<td>Density</td>
<td>8.8-9.2 lb/gal (1.05-1.10 kg/l)</td>
</tr>
<tr>
<td>Solvent Composition</td>
<td>100% water</td>
</tr>
</tbody>
</table>

Note: Heavier coating weights are suggested for lower WVTR (Water Vapor Transmission Rate)

PACKAGING AND STORAGE
EcoShield® Barrier Coating is available in 5 gallon (19 liter) plastic pails, 55 gallon (208 liter) metal drums, liquid totes, and bulk.

Keep from freezing.
WATER VAPOR BARRIER PROPERTIES

<table>
<thead>
<tr>
<th></th>
<th>EcoShield® Barrier Coating for Paper</th>
<th>Polycoated Paper</th>
<th>Waxed Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTR** (g/hour*m²)</td>
<td>0.61-0.69</td>
<td>0.4-0.71</td>
<td>6.5-6.9</td>
</tr>
</tbody>
</table>

**Tested according to ASTM E-96, 73°F, 50% RH, Example test ranges for: EcoShield® Barrier Coated Paper (45# 3msf Natural Kraft Paper, 10# Coating) a comparable polyethylene coated paper (40# 3msf paper, 6# PE coating) and commercial waxed paper.

FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION

LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec® Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec® Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec® Corporation’s obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec® Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement products shall be paid by customer. Cortec® Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec® Corporation.

The foregoing warranty is exclusive and in lieu of all other warranties, express, implied or statutory, including without limitation any implied warranty of merchantability or of fitness for a particular purpose. In no case shall Cortec® Corporation be liable for incidental or consequential damages.

Distributed by:

4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
http://www.cortecvci.com

Printed on recycled paper 100% post consumer

Revised: 11/29/17. Supersedes: 02/25/15 ©Cortec Corporation 2002-2017 of Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited. 2017, ©Cortec Corp. ISO accreditation applies to Cortec’s processes only.