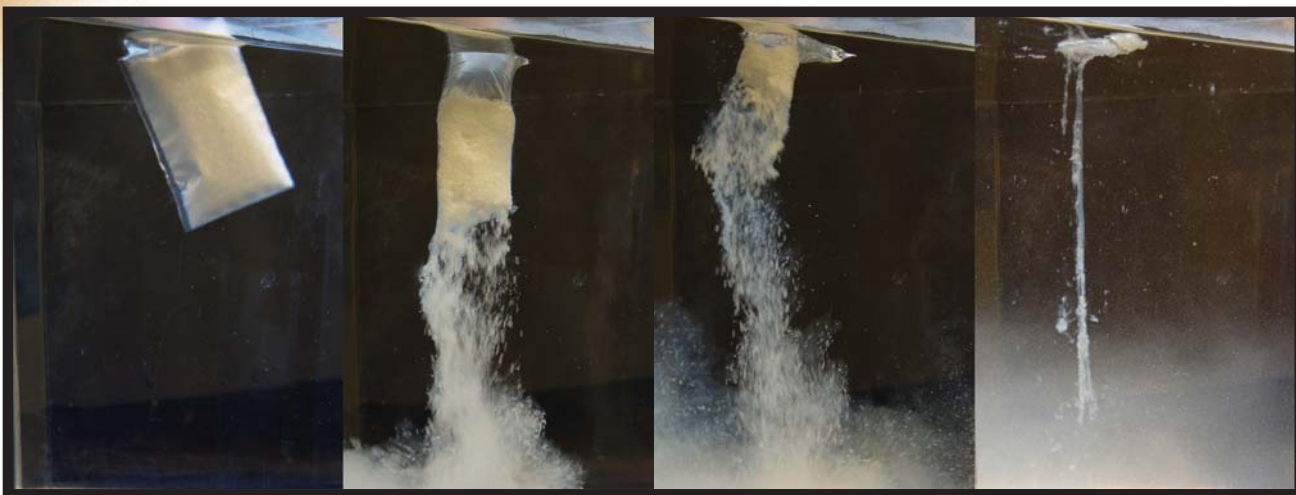




HIGH PERFORMANCE VpCI® PACKAGING

EcoSol™

Water soluble packaging solution



PRODUCT DESCRIPTION

EcoSol is a water soluble, biodegradable polyvinyl-alcohol (PVA) film, ideally suited for many packaging applications. Water soluble PVA bags, sachets or pouches created from this film, provide a convenient, safe and economical delivery system for a wide range of products including detergents and cleaners, degreasers, concrete additives, pigments, biocides, water-treatment products, agricultural products, and others.

EcoSol film has excellent organic solvent resistance, which allows EcoSol pouches and bags to be used not only for dry powders, but also for liquid products.

EcoSol offers very good mechanical properties: tensile strength, tear strength, puncture resistance. These properties allow EcoSol to be used in a wide variety of rigorous applications.

EcoSol expands Cortec's line of biodegradable materials: after a few minutes of immersion at the specified temperature, EcoSol dissolves in water leaving a harmless, non-toxic aqueous solution of polyvinyl alcohol. Once solution of PVA comes into contact with microorganisms such as those found in water-treatment plants, conversion to carbon dioxide and water takes place within about 30 days.

ADVANTAGES

- Customer friendly
- Improves accuracy of dosing
- Improved safety
- Wide range of uses
- Biodegradable
- Resistant to organic solvents
- Heat-sealable
- Can be printed with standard inks
- Eliminates direct handling of powders and liquids

TYPICAL USES

EcoSol can be used for packaging:

- Detergents and cleaners
- Degreasers
- Concrete additives
- Pigments
- Water-treatment products
- Biocides
- Agricultural products
- Bathing products
- Cosmetic industry (disposable cases)
- Laundry bags for hospitals



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Environmentally Safe VpCI®/MCI® Technologies

APPLICATION

Remove the outer barrier bag and place the Ecosol bag and its contents into the water. The time for the bags to be dissolved in the water varies, depending on thickness of EcoSol and the temperature of water.

For example, EcoSol 1.5 mil (37.5 microns) thickness at 68°F (20°C) begins to dissolve within 30 seconds and is fully dissolved in 5 minutes.

MECHANICAL PROPERTIES of EcoSol at 2 mils (50 microns)

Test Method	EcoSol	Low-Density Polyethylene Film
Tear Test (gf) ASTM D-1922	1093 (CD*)	989.33 (CD*)
Tensile Strength nominal (lb)	0.73 (MD*) 1.20 (CD*) (0.33/0.54 kg)	0.38 (MD*) 1.04 (CD*) (0.17/0.47 kg)
Impact-Puncture ASTM D 3420-95B (J)	1.05	0.04

*Machine Direction (MD)/Cross Direction (CD)

OTHER PROPERTIES

Appearance Clear transparent film
Chemically Reistant to
- Mineral, vegetable, animal oils
- Aliphatic hydrocarbons
- Ethers, Esters, Ketones

AVAILABILITY

Available in sheets and bags in a variety of dimensions and thicknesses. Contact Cortec's customer service for availability of custom dimentions and forms.

PACKAGING and STORAGE

EcoSol is packaged in barrier film. Keep in dry storage area at 20-22°C (68-72°F). Shelf life of the product is 2 years, if barrier film is kept intact.

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINER TIGHTLY CLOSED

NOT FOR INTERNAL CONSUMPTION

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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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
Internet <http://www.CortecVpCl.com>

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