



xiGuard

Photocatalytic Coating

Environmental Coatings Inc. PRODUCT DATA SHEET OxiGuard 1.0% Solution

PRODUCT DESCRIPTION:	OxiGuard 1.0% solution is a clear, colorless, non-toxic, environmentally friendly, water and titania based, photocatalytic mineral film former that contains nanoparticles of highly photoactive anatase Titanium Dioxide suspended in water. OxiGuard 1.0% air-dries to form amorphous mineral film surfaces that are self-cleaning, odor killing, and germ resisting when irradiated by UV light. End use applications include self-cleaning building surfaces, environmental control, infection control, and odor abatement.	
APPLICATION BENEFITS:	When energized by UV light (abundant in sunlight and sufficiently present in indoor fluorescent lighting), a OxiGuard coated surface is: photocatalytic - it perpetually creates hydroxyl radicals that continuously oxidize organic matter. hydrophilic - it causes water to sheet away. long lasting - it will continue to stay clean, resist germs, and eliminate odors for years.	
RECOMMENDED USES:	For direct use on any inorganic surface, including: non-transparent glass, ceramic tile, cement, & metal. OxiGuard 1.0% solution's robust photoactivity make it ideal for use on opaque surfaces. For most inorganic and all organic substrates (paint, plastic or wood), apply a barrier film (OxiShield) first to promote adhesion and insure a long lasting photocatalytic effect.	
PHYSICAL DATA:	Solids by Volume = <1.0% Weight/Gallon = 8.3 –8.4 lbs. per Gallon pH = 7.0 - 8.5 Color= Milky White, clear when dry	Solids by Weight = 1.0% VOC Levels with additives = 0 Grams / Liter Adhesion= 4B-5B (cross hatch) Hardness= 5H-7H
SURFACE PREPARATION:	Glass - clean the glass substrate thoroughly with soap and water. Avoid cleaning products containing ammonia to prevent a disruption of the pH balance in the OxiGuard solution. Ceramics, metal, concrete or cement – wash surface clean and dry before application. Organic Substrates (paint, plastic, wood) – apply OxiShield barrier film first, then apply OxiGuard. This protects underlying substrates from potential degradation.	
LIGHT REQUIREMENTS:	OxiGuard coated surfaces need the UV irradiance of 0.1 mw/cm ² to trigger the decomposition of organic matter and 0.001 mw/cm ² for odor abatement and sanitation. A 20-watt fluorescent lamp irradiates UV in the range of 0.002-0.003 mw/cm ² from a distance of 1 meter. A 20-watt black light bulb irradiates UV in the range 0.1mw/cm ² from a distance of 1 meter. Sunlight provides ample UV for exterior surfaces, even on cloudy days.	
APPLICATION:	Spray apply with a power spray gun and tip size of 0.031 inches (0.8mm) or less. Apply from 12-18". Allow up to 4 hours for drying. Allow up to 1 day of UV exposure before checking for photocatalytic effect.	
EXPECTED COVERAGE:	500-1,000 sq. ft./liter at 1-3microns wet (6-18 grams/ sq. meter)	
NUMBER OF COATS:	2 coats (Note: each coat is an ultra fine misting until film is formed). Allow 2 minutes between coats.	