

Eco-Clear

A MULTI-FUNCTIONAL, HIGH PERFORMANCE WATERBASED PROTECTIVE CLEARCOAT



ASSERO COATING
TECHNOLOGIES

1.0 - PRODUCT DESCRIPTION

Eco-Clear is a waterbased multi-surface protective clearcoat engineered with an eco-innovative* 3D⁹ nano-structure and remarkable adhesion to multiple surfaces including wood, concrete, brick and metal. Based on an industry award-winning, disruptive coating technology, **Eco-Clear** leads the way in sustainability as a green, odorless, non-polluting coating technology for the long term durability, care and maintenance of assets.

Eco-Clear quickly bonds to form a long term protective barrier against the elements. **Eco-Clear** excels in scratch, chip, marring, abrasion, and UV resistance; and it provides extreme protection to help prevent damage from water & moisture penetration and the effects of weathering and corrosion that an asset will encounter during its service life. * *"Eco-Innovation is the development of products and processes that contribute to sustainable development, applying the commercial application of knowledge to elicit direct and indirect ecological improvement."* Wikipedia

2.0 - PRODUCT ADVANTAGES & BENEFITS

Eco-Clear helps to prevent damage from:

- Water and Moisture Penetration
- Chipping, Scratching, Marring and Abrasion
- Weathering and UV Degradation
- Corrosion

Eco-Clear provides long term protection

- Reduces Maintenance / Recoat Cycles
- Reduces Expenses

3.0 - APPLICATION POTENTIAL

Eco-Clear is effective for both interior and exterior use:

- Wood Flooring
- Manufactured Wood Products
- Concrete
- Brick*
- Stucco
- Some Plastics
- Painted Surfaces

(*see Section 9 for proper application instructions)

4.0 - PHYSICAL PROPERTIES

Table 1			
Polymer Chemistry	Nano-Structured Polyurethane Hybrid	Flash Point	Non-combustible
Viscosity	20 Seconds Zhan 2 cup	Vapor Pressure (Pa)	17 mmHg at 20°C Water
Weight per Gallon	8.1 Lbs (3.7 Kg)	Solubility in Water	Soluble
Percent Weight Solids (by Volume)	30%	Gloss per ASTM D532 (20° / 60°)	86.0 / 92.2
Percent Weight Solids (by Weight)	30%	Surface Coverage (ft ² / m ² DFT)	960 ft ² (89 m ²) / US gallon @ 0.6 mil (0.0152 mm)
Pencil Hardness ASTM D3363	3H	Air Quality Information	Zero VOC; Zero HAP



5.0 - PRE-APPLICATION CONSIDERATIONS



All surfaces to be coated must be clean, free of loose debris, stains, rust, vegetative growth, efflorescence, graffiti, oil, grease, moss, mildew, chalked/oxidized paint, and any other unsound or foreign materials which can inhibit the penetration, chemical bond, adhesion and long-term performance of **Eco-Clear**.

IMPORTANT: **Eco-Clear** without Proper Surface Preparation = **Failure**
 Eco-Clear with Excellent Adhesion = **Long Term Service Life**

*"The proper application of **Eco-Clear** is very important in order to achieve its optimum performance. The substrate type (material composition) and its surface preparation are CRITICALLY important prior to the application of **Eco-Clear**. The application parameters for **Eco-Clear** are just as important (or even more important than) achieving the desired physical properties."*

Thomas Choate, CTO and Principal Scientist, Nanovere Technologies, LLC.

6.0 - SURFACE PREPARATION



Prior to the application of Eco-Clear, surfaces to be coated must be completely dry and free of grease, oil, soil, biological contaminants, dust, abrasive materials water soluble salts, chlorides, sulfates, scale, rust and/or other forms of contamination.

Remove water soluble salts, chlorides, sulfates, grease, oil and biological contaminants with an appropriate decontamination agent. Please contact **Assero, ProGuard** or your **Eco-Clear** representative for further information.

7.0 - APPLICATION ENVIRONMENT

It's important to apply **Eco-Clear** in an environment that is as dust-free as possible in order to avoid surface contamination. **Eco-Clear** is engineered to create high "crosslink" density during its curing process. **Eco-Clear** is best applied when the surface and air temperatures are between **13° - 32°C (55°F - 90°F)**, and the relative humidity (R.H.) is at 50% during both application and curing time.

8.0 - APPLICATION EQUIPMENT



Eco-Clear can be applied using HVLP (high volume low pressure) or Airless paint sprayer equipment. We highly recommend using a dedicated compressed air supply line with an appropriately sized air filtration system and air dryer for best results.

Table 5

AIR SPRAY EQUIPMENT		
Spray type	HVLP	
Fluid Tip	1.4 or 1.5 mm	
AIRLESS SPRAY EQUIPMENT		
Tip Size	0.015 or 0.018	
Pump Pressure	800 psi / 55 Bar	
Manual Application Equipment		
"Wipe-on" Tools	Paint Pad (eg. - 9 inch Shur-Line Deck Painter Pad, available at Home Depot)	
	High Density Foam Brush	
Spray Tools	Construction grade hand-pump sprayer	

9.0 - APPLICATION GUIDELINES

GENERAL: Always pre-test Eco-Clear on the surface/substrate to verify suitability of the application.

RECOMMENDED FILM BUILD

Apply 1 - 2 overlapping coats of Eco-Clear. Allow 5 - 10 minutes between each coat.

TABLE 6

Recommended Wet Film Thickness (WFT)	1.5 - 2.0 mils / wet coat
Recommended Dry Film Thickness (DFT)	0.6 - 1.2 mils

CURE TIME

TABLE 7

	@ 22°C (72°F)	@ 60°C (100°F)
Dry to Touch Time	10 minutes	---
Air Full Cure Time	24 - 48 hours	---
Bake Time (Optional)	---	10 minutes

* Higher temperatures will speed up the curing rate.
* Lower temperatures will slow down the curing rate.

SURFACE COVERAGE & PACKAGE OPTIONS

TABLE 8

Surface Area Coverage	960 ft ² (89 m ²) / US gallon @ 0.6 mil (0.0152 mm) (2 wet coats @ 1.2 mils WFT / coat)
	254 ft ² (24 m ²) / Litre
Packaging Options	20 L (5.2 US Gallons) Plastic UN Rated MultiCan
	208 L (55 US Gallons) Drum
	1040 L (275 US Gallons) IBC Tote

APPLICATION - OXIDIZED PAINTED SURFACES

- The first coat of Eco-Clear will bond, restore and enhance the underlying oxidized basecoat.
- Wet coats 2 (and 3 if required) will serve to "Fill & Fortify" the oxidized paint and build a film thickness to the desired level to meet the optimum designed level of 0.6 - 1.2 mil DFT.

NOTE: Use of a WFT gauge (Standard ISO2008-7B, ASTM D4414) is highly recommended to accurately ensure that the recommended coating film build is achieved.

APPLICATION - BRICK SURFACES

Please refer to Assero.co for information for use on brick surfaces.

CLEANUP

Eco-Clear can be cleaned up with warm clean water prior to film build.

Dispose of cleaning materials appropriately. Local, state/provincial, city, and federal laws and regulations may apply to releases and disposal of materials and items employed in the clean up. You will need to determine which federal, state/provincial, city, and local laws and regulations are applicable.

10.0 - STORAGE & SHELF LIFE

DO NOT leave a container open/uncapped for extended periods of time. Doing so will shorten the shelf life. **DO NOT ALLOW TO FREEZE**

- Store in a dry, well ventilated place at a temperature between 7 - 27°C (45 - 80°F) to ensure long shelf life.
- Keep container tightly closed.



11.0 - HEALTH & SAFETY PRECAUTIONS

Eco-Clear is safe to use and apply when recommended precautions are followed. Before the application of **Eco-Clear**, please read and understand the **Safety Data Sheet (SDS)**, which provides information on health, safe handling, cleanup, environmental hazards, first aid recommendations, and the use of personal protective equipment (PPE). Circulate sufficient fresh air to maintain a working environment below NIOSH PEL and LEL exposure levels. Apply according to local, state/provincial, and federal (OSHA) regulations.

12.0 - WARRANTY & LEGAL DISCLAIMER

DISCLAIMER / LIMITATIONS OF LIABILITY: The data contained within this Technical Data Sheet represents typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. The environmental conditions present at the time of application, the proper preparation of the substrate, consideration for the use case of the asset to be coated, and the skill of the applicator, are all significant factors in the performance of this product. No warranty or liability for the performance of the product will be accepted unless specifically agreed to by us in writing. **ASSERO COATING TECHNOLOGIES assumes no obligation or liability for use of this information. ASSERO WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Please contact **ProGuard, Assero Coating Technologies** or an authorized **Eco-Clear** representative for more information, current pricing, or to discuss your application or project.

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