



Product Information Sheet

ESI 1000

PRODUCT DESCRIPTION

ESI 1000 is a solvent-free, two component seamless epoxy coating system. It exhibits very good chemical and physical properties and is esthetically pleasing. This system has been approved by the Canadian Food Inspection Agency (C.F.I.A).

- May apply several layers onto itself with excellent adhesion.
- Contains no solvent with a very low VOC content (VOC = 88g/liters), allowing for interior application without harmful odors.
- Excellent adhesive properties allow application onto many different types of substrates.

ADVANTAGES

- Dense surface resistant to bacteria, moisture and is easy to clean.

TECHNICAL DATA

Packaging	11.35 L (3 US gal.) and 56.7 L (15 US gal.)		
	Part A	Part B	Mix
	Upon Request	Clear to Amber	Upon Request
Recommended Thickness	Primer	6-8 mils	
	Finish Coa	8-12 mils	
Mileage per gallon (8 mils thickness)	200 ft ²		
Mileage for Slurry Application (50% Silica Sand) (12 mils thickness)	60 ft ²		
Shelf Life	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.		
Mix Ratio, by volume	A:B = 2:1		
Mix Ratio, by weight	Clear	A:B =100:41-48	
	Colours	A:B =100: 39-45	
Pot Life (454 g)	40-50 minutes @ 25°C		

PROPERTIES @ 23°C (73°F) AND 50% R.H.

Solids Content, by weight	100%		
Solids Content, by volume	100%		
Density (kg/L)	Part A	Part B	Mix
	Clear	1.05-1.10	0.9-1.0
	Colours	1.10-1.15	0.9-1.0
Thinner Recommended	SCT-0001		



PROPERTIES @ 23°C (73°F) AND 50% R.H. (cont'd)

Waiting Time/ Overcoatability

Before Applying ECTR over primer	Substrate Temperature	Minimum	Maximum
	+ 10 °C	24 hours	3 days
	+ 20 °C	12 hours	2 days
	+ 30 °C	6 hours	1 day

Before Applying Second Coat of ECTR	Substrate Temperature	Minimum	Maximum
	+ 10 °C	30 hours	3 days
	+ 20 °C	24 hours	2 days
	+ 30 °C	16 hours	1 day

Curing Details	Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
	+ 10 °C	30 hours	5 days	10 days
	+ 20 °C	24 hours	3 days	7 days
	+ 30 °C	16 hours	2 days	5 days

*** Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity. ***

Bond Resistance (psi), ASTM D4541	>300 (substrate ruptures)			
Permeability (%), ASTM D570	0.3 %			
Hardness (Shore D), ASTM D2240	85-90			
Abrasive resistance, ASTM D4060 (CS17 / 1000 cycles / 1000 g)	0.10 g			
Viscosity @ 25°C	Part A	Part B	Mix	
	Clear	1200-1400	200-400	650-750
	Colours	1400-1600	200-400	1200-1400
Traction Resistance (psi), ASTM D63	6500			
Compressive Strength (psi MPa), ASTM D695	14000			
Elongation %, ASTM D638	6.7			

*** Please note, that the indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same surface area. ***

SURFACE PREPARATION

Old Concrete

Concrete surface must be cleaned and mechanically prepared using shotblasting, sand blasting, and/or diamond grinding. All oils, sealers, curing agents, waxes and fats must be removed prior to product application. Do not apply onto wet substrates. Chloride, moisture, and pH levels should be checked prior to application. Primer is suggested prior to application on porous concrete substrates. All cracks and substrate imperfections should be filled and repaired prior to application.



SURFACE PREPARATION
 (CONT'D)

New Concrete

New concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lbs./inch²) after 28 days and traction resistance must be at least 1,5 MPa (218 lbs./inch²). Shotblasting, sand blasting, and/or diamond grinding is required to remove the surface laitance that appears during the concrete finishing and curing process. Primer should be used to seal porous concrete surfaces prior to application. All cracks and substrate imperfections should be filled and repaired prior to application.

MIXING

Materials should be pre-conditioned to a minimum of 10°C prior to use. Thoroughly mix each component separately using paddle mixers and a drill for a minimum of 2 minutes to place the solids content evenly in suspension. Pour component B into component A using the proper mixing ratio of 2A:1B by volume. Mix both components for at least 3 minutes using a drill at low revolution (300 to 450 rpm) to reduce trapping of air. While mixing, scrape bottom and walls of container at least once to ensure a homogeneous mix. Only prepare quantity that may be applied during pot life of mixture.

APPLICATION

Apply mixed product on the prepared surface tightly (thin film) using a rubber rake and pass a roller to obtain a uniform coating. Avoid creating puddles.

CLEANING

Clean all tools and materials with the cleaner/thinner for epoxies. Wash hands and skin carefully with warm soapy water. Once product has hardened, it may only be removed through mechanical means.

RESTRICTIONS

- Minimum/Maximum temperature of substrate: 15°C / 30 °C (59 °F / 86 °F).
- Maximum relative humidity during application and curing: 85 %.
- Substrate temperature must be 15 °C (59 °F).
- Humidity content of substrate must be < 4 % when coating is applied.
- Do not apply on porous surfaces where a transfer of humidity may occur during application.
- Avoid exterior use on substrates at ground level.
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period.
- Surface may discolor in areas exposed to regular ultraviolet light.

CHEMICAL RESISTANCE

TEST GROUP	1 DAY IMMERSION	1 DAY SPILLAGE	3 DAYS IMMERSION	3 DAYS SPILLAGE	7 DAY IMMERSION	42 DAYS IMMERSION
Petrol containing max. 5 vol.-% bio alcohol	A	A	A/D	A	A/D	B/D
Aircraft fuel	A	A	A	A	A/D	A/D
Heating fuel / unused engine and lubricating oils	A	A	A	A	A	A
All hydrocarbons containing max. 5 vol.-% benzene, except petrol	A/E	A	A/D	A/D	A/D	A/D



CHEMICAL RESISTANCE (cont'd)						
TEST GROUP	1 DAY IMMERSION	1 DAY SPILLAGE	3 DAYS IMMERSION	3 DAYS SPILLAGE	7 DAY IMMERSION	42 DAYS IMMERSION
Crude oil	A	A	A/D	A/D	A/D	A/D
Used engine and lubricating oils	A/D	A	A/D	A/D	A/D	A/D
Alcohols (max. 48 vol.-% Methanol), glycol ethers	A/D	A	A/D	A	B/D	B/D
All alcohols and glycol ethers	B/D	A	B/D	A/D	C	C
Aliphatic and aromatic halogen hydrocarbons $\geq C_2$	B/D	A	B/D	A	C	C
Aromatic halogen hydrocarbons	A/D	A	B/D	A	B/D	C
All esters and ketones	B	A	A/D	A	B/D	C
Aromatic esters and ketones	A/D	A	A/D	A	A/D	B/D
Biodiesel	A/D	A/D	A/D	A/D	A/D	A/D
Watery solutions of aliphatic aldehydes (up to 40%)	A	A/D	A/D	A/D	A/D	A/D
Aliphatic aldehydes including their watery solutions	C	A	C	A	C	C
Watery solutions of organic acids (carbon acids) (up to 10%) including their salts (in watery solution)	A/D	A/D	A/D	A/D	A/D	C
Organic acids (Carbon acid) including their salts (in watery solution) except formic acid	A/D	A/D	B/D	A/D	C	C
Mineral acids (up to 20%) and acidious hydrolysing salts (pH < 6)	A/D	A/D	A/D	A/D	A/D	A/D



CHEMICAL RESISTANCE (cont'd)						
TEST GROUP	1 DAY IMMERSION	1 DAY SPILLAGE	3 DAYS IMMERSION	3 DAYS SPILLAGE	7 DAY IMMERSION	42 DAYS IMMERSION
Anorganic lyes and alkaline hydrolysing salts (pH > 8)	A	A	A/D	A	A/D	A/D
Watery solutions of anorganic, non-oxidizing salts (pH 6-9)	A	A	A	A	A	A
Amines and heir salts (in watery solution)	A/D	A	A/D	A	B/D	B/D
Watery solutions of organic tensides	A	A	A/D	A	A/D	A/D
Watery solutions of organic	A/D	A	A/D	A/D	A/D	A/D
Cyclic and acyclic ethers	B/D	A	C	A	C	C
Acyclic ethers	A/D	A	A/D	A	B/D	C
Lactic acid 40%	A/D	A/D	A/D	A/D	A/D	B/D
Na-hypochlorite 4.4%	A/D	A	A/D	A/D	A/D	A/D
A = Resistant B = Limited Resistant C = Not Resistant D = Discolouration a/o loss of gloss (irreversible)						

HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult a physician. For respiratory irritation, move affected person to fresh air. Remove contaminated clothes and clean before reuse.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with product may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

IMPORTANT NOTICE

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