



Product Information Sheet

ESI 5000

PRODUCT DESCRIPTION

ESI 5000 is solvent free two component, 100% epoxy coating system. It exhibits excellent clarity, smooth or orange peel textured finish and good chemical resistant properties. ESI 5000 is approved by CFIA.

ADVANTAGES

- Excellent compressive, flexural and tensile strength
- Very low odour
- Dense surface resistant to bacteria and moisture and easy to clean
- May apply several layers on itself
- Excellent adhesive properties, allowing application on most firm, hard surfaces, as well as a full concrete failure when applied to properly prepared bare concrete
- Excellent chemical resistance
- Reduced ambering for clear top coat applications over decorative systems or stains and dyes
- Long pot life, 35 minutes @ +20° C (+68° F).

COLOUR

Ultra clear, Colour packages may be added for pigmenting to any colour

OPERATION

Surface Preparation

Concrete surface must be clean. Remove any dust, grease, oil, dirt, curing agents, wax foreign substances and disaggregated substances by diamond grinding, shot blasting or scarifying. 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)

PHYSICAL PROPERTIES

	PART A	PART B	MIXED
Colour	Clear	Light Amber	Clear
Type	Epoxy Resin	Amine Resin	-
Viscosity (cps) @ 25°C	800-1000	800-1000	800-1000
Solids by weight %	100	100	100
Solids by volume %	100	100	100
Thinner	IPA	IPA	IPA
Density (kg/li)	109	0.9629	-

Mix

Premix each component separately. Pour component B into component A using the proper mixing ration. Mix both components for at least 3 minutes using a drill at low revolution (300 – 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.

Application

Apply mixed product on the prepared surface using a rubber squeegee and pass a roller to obtain a uniform coating. Avoid creating bubbles.

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: 10°C/30°C
- Maximum relative humidity during application and curing: 85%
- Substrate temperature must be a minimum 3°C above dew point measured
- 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



PHYSICAL PROPERTIES (cont'd)

Mixing ration by volume	2	1	-
Cure time to walk on @ 25°C	-	-	12 hours
Cure time to walk on @ 20°C	-	-	24 hours
Cure time to drive on @ 20°C	-	-	36 hours
Storage	12 months	12 months	
Pot Life	-	-	35 minutes

CURED RESIN PERFORMANCE FOR ESI 5000

Description	Test Method	Results
Solids Content	ASTM D2697	100%
Hardness (Shore D)	ASTM D2240	82
Compressive strength	ASTM D695	13,100 psi
Compressive modulus	ASTM D695	331,000 psi
Tensile strength	ASTM D638	8,200 psi
Tensile modulus	ASTM D638	433,000 psi
Elongation at break	ASTM D638	7%
Flexural strength	ASTM D790	12,400 psi
Flexural modulus	ASTM D790	389,000 psi
Adhesion	ASTM D4541	350 psi
Izod impact strength	ASTM D256	0.52 ft. lbs/in. notch
Taber abrasion (CS-10)	ASTM D4060	33 mg loss (1000 cycles)
Water resistance	ASTM D570	0.16%
Fungus/Bacteria resistance	Mil-F-52505	No support of growth (TT-P34)

MAXIMUM TEMPERATURE LIMITS FOR ESI 5000

Dry heat	+110° C (+230° F)
Spills	+66° C (+150° F)
Immersion	+66° C (+150° F)
Cold	-40° C (-40° F)

Above temperature limits are laboratory test results.

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 with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothing and clean before reuse. For more information consult the material safety data sheet.

Component A – Irritant – Contains epoxy resin. Prolonged contact of this product with the skin is susceptible to provoke an irritation Avoid eye contact.

Component B – Irritant – Contains amines. Contact with skin risks to cause serious burns. Avoid eye contact. Avoid breathing vapours released from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapours approved by the NOISH/MSHA is recommended. Predict suitable ventilation. Consult the material safety data sheet for further information.

IMPORTANT NOTICE

All statements, recommendations and technical information contained in this document are accurate to the best knowledge of Epoxy Solutions. The data relates only to the specific material designated herein. It may not be valid if used in combination with and other materials. It is the users' responsibility to verify suitability of this information for their own particular use. Epoxy Solutions assumes no legal responsibility for use upon these data.