



EpoxySystems' Product #648

100% Solids Chemical Resistant Coating

DESCRIPTION:

EPOXYSYSTEMS' PRODUCT #648 Chemical Resistant Coating is a two component high performance epoxy resin formulated with a convenient 1 to 1 mix ratio. **EPOXYSYSTEMS' PRODUCT #648 Chemical Resistant Coating** has been developed as a coating for exposure to organic acids and other severe chemical environments.

It is used widely in the food and chemical industries for protection of concrete, wood, and steel. **EPOXYSYSTEMS' PRODUCT #648** is suitable for application by brush, roller or spray. Where in-shop production techniques may be utilized and elevated temperature curing is feasible, rapid property development may be achieved by curing at 200 - 250°F (93 - 121°C). This will provide a cured film which may be handled within a relatively short period of time (about 4 hours). Elevated temperature curing will also enhance ultimate physical and chemical resistant properties.

WHERE TO USE:

- Floor coatings
- Chemical resistant laminating resin
- Laboratory table top coating
- Industrial flooring compound
- Tank linings
- Sodium hypochlorite tank coating
- Jet engine test cells

PHYSICAL PROPERTIES:

Ultimate tensile strength - ASTM D638	9,500 psi
Tensile elongation - ASTM D638	3%
Ultimate flexural strength -ASTM D790	16,000 psi
Ultimate compressive strength -ASTM D695	14,500 psi
Compressive yield strength - ASTM D695	12,500 psi
Izod impact - ASTM D256	.041 ft. lbs.
Hardness (Shore D) - ASTM D1706	85
Linear Shrinkage	0.0033 inches/inch

SURFACE PREPARATION:

All surfaces to receive EPOXYSYSTEMS' PRODUCT #648 must be clean, dry, sound and free from any materials which might interfere with adhesion. Sanding, sandblasting, acid etching, or scarification is recommended depending on the surface to be covered.

MIXING:

Combine one part by volume of base with one part by volume of hardener. Mix thoroughly for three minutes until uniform color blend with no streaks. Apply immediately. A 1/2" drill equipped with properly sized paint paddle is required for mixing.

CHEMICAL RESISTANCE:

The following represents percent flexural strength retained after two week's cure at 77°F (25°C) followed by 30 days immersion in the chemical environment as described.

	@ 77°F	@ 140°F
45% Nitric Acid	100%	100%
25% Acetic Acid	100%	100%
35% Hydrochloric Acid	100%	100%
20% Sulfuric Acid	100%	100%
Skydrol	100%	
15% sodium Hypochlorite	100%	97%
50% Potassium Hydroxide	100%	100%
30% Sodium Hydroxide	100%	100%
50% Sodium Hydroxide	99%	97%

A 98% solution of acid is not as harmful to **EPOXYSYSTEMS' PRODUCT #648** as 15% to 50% of hydrolyzed substances. Since hydrolyzed substances vary, for best results, tests should be performed before **EPOXYSYSTEMS' PRODUCT #648** is used to assure good performance. In addition, **EPOXYSYSTEMS' PRODUCT #648** is resistant to all alcohols and solvents such as acetone, toluol and methyl cellosolve.

POT LIFE:

Pot life of a one-quart mass of **EPOXYSYSTEMS' PRODUCT #648** is approximately 30 to 40 minutes. Pot life may be extended by spreading out material.

APPLICATION:

Mix and apply coating by brush or roller at the rate of approximately 125-150 sq. ft. per gallon. (If desired, coating may also be thinned with **EPOXYSYSTEMS' PRODUCT #648**

Solvent/Thinner and sprayed maximum 5% by volume.) A minimum of two coats is recommended. Second coat may be applied after first coat has become tack free, usually 5-6 hours.

CURE CYCLE:

After application, allow 16-24 hours cure at 75°F (24°C) **for traffic bearing purposes only**.

Allow at least 3-5 days cure at 75°F (24°C) for development of chemical resistant properties.

Note: This material will cure well at temperatures as low as 35°F (3°C). However, additional curing time must be provided.

SHELF LIFE:

2 years

SAFETY & CLEANLINESS:

Clean hands with soap and water or waterless hand cream. Apply under conditions of good ventilation. Avoid contact of **EPOXYSYSTEMS' PRODUCT #648** with skin. Clean equipment with **Solvent/cleaner**.

CAUTION:

"A" Component contains epoxy resin. DANGER! "B" Component contains alkaline amines; strong sensitizer. May cause skin sensitization or other allergic responses. Use with good ventilation, particularly if material is heated or sprayed. Prevent all contact with skin and eyes. Wear protective clothing, goggles, gloves, and/or barrier creams. Keep container closed when not in use. Wash thoroughly after handling.

FIRST AID:

In case of skin contact, immediately wash with soap and water. In case of eye contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If irritation persists seek medical attention. Wash clothing before reuse.

FOR INDUSTRIAL USE ONLY. KEEP AWAY FROM CHILDREN

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