



## **HYCHEM E400 FOR FLOOR COATING (SELF-LEVELING)**

### **DESCRIPTION**

Hychem E400 is a solvent free two component epoxy resin system with superior adhesion, mechanical and chemical properties, epoxide resin for wide applications.

### **USES**

- Floor of general buildings
- ◆ Hotels, departmental stores, apartments, halls, stores, schools, hospitals, restaurants, gymnasiums, workshops, laboratories, etc.
  
- Factories
- ◆ Floor and wall of chemical plants, oil and fat factories, dairy factories, petroleum refinery, pulp and paper mills, sugar plants, food and beverage processing plants, abattoirs, plating factories, printing house, clean rooms, etc.
  
- Others
- ◆ Swimming pool, water tanks, basement, sewer treatment plant, water treatment plant, roof of building, machinery mounts etc.

### **FEATURES**

- High adhesion strength to concrete, mortar, metal etc and can afford bonding with wet surfaces.
- Excellent resistance to chemicals.
- Superior wear resistance property, providing a more durable floor free from dust.
- Waterproof.
- Solvent free.
- Seamless coating.
- Excellent lustrous surface finish in a variety of standard colors.
- Non-slip finish if required.
- Easy maintenance.



## SPECIFICATION

### 1. E400 EPOXY RESIN PROPERTY

	<u>RESIN A</u>	<u>HARDENER B</u>
Main components	epoxy resin	polyamine
Solid contents	100%	100%
Viscosity cps/25°C	3,000 – 6,000	1,000 – 1,2000
Specific gravity	1.45 ± 0.1	1.05 ± 0.05
Mixing ratio	3 : 1	
Pot life (1kg)	20 min/30°C, 45 min/20°C	120 min/10°C
Initial drying time	8 – 9 hours / 20°C	

### 2. MECHANICAL STRENGTH OF CURED RESIN

Testing Method: JIS K6911, 20°C/7 days

<u>Item</u>	<u>Result</u>
Compressive strength	861 kg/cm <sup>2</sup>
Tensile strength	99 kg/cm <sup>2</sup>
Elongation	16%
Specific gravity	1.35
Shore hardness ASTMD	70
Anti-abrasion	CS-17, 1kg 1,000R

### 3. CHEMICAL RESISTANT

Hychem E400 resists the normal effects of solvents, oils, fats, water and commonly used acids, alkali and salts.

Testing Method: JIS A5705, 20°C/7 days

<u>Item</u>		<u>Result</u>
Water	20°C	Excellent
	50°C	Excellent
Machine oil	20°C	Excellent
Heavy duty oil	20°C	Excellent for long term use
H2SO4	15%	Good (E450)
HCL	15%	Good
Acetic acid	15%	Good
NAOH	15%	Excellent
Solvent	95%	Good, but long term not recommended



#### 4. WEATHER RESISTANCE

<u>Item</u>	<u>Temp (2 mths)</u>	<u>Result</u>
Sunlight	-	Excellent
Sunlight & water	-	Excellent
High humidity	40°C, 90%	Excellent
High temperature	70°C	Excellent
Under water	RT	Excellent
	50°C	Excellent
	70°C	Excellent
Water running way	-	Excellent

#### APPLICATION INSTRUCTIONS

New concrete floor to receive Hychem epoxy flooring shall be

- Power floated and leveled to finish and no cement shall be sprinkled over during floating.
- Free of oil/grease staining, sealers, curing compound, paints, other contaminants.
- Waterproofed for floor slabs at ground floor level or area subject to high water table and rising moisture.
- Allowed to cure for a minimum period of 28 days.

Old concrete surface to receive Hychem epoxy flooring shall be sound and stable, free of oil/grease staining, sealer, paints and waterproofed (for floor slab at ground floor level or area subject to high water table and rising moisture).

#### SUBSTRATE PREPARATION

Surface of concrete slab, whether new or old, to receive Hychem epoxy flooring can either be acid-etched or mechanical grind/sand, scabbed, grit blasted to remove any dirt, dust, grease, laitance, paints, coatings or other contaminants and to provide a rougher surface for good bonding. Metal surfaces can be cleaned with TCE or similar solvents, detergent to remove oil and or mechanically sand or wire brush.

#### PRIMING

One coat of Hychem E200 as primer at approximately 0.2kg to 0.3kg/m<sup>2</sup> (depending on porosity of surface) shall be applied to substrate before application of Hychem E400 coating).



#### MIXING AND APPLYING

- *Pour the correct proportion of E400 component A and B into a suitable container sufficient for the application and stir with a low speed drill stirrer until two components are evenly mixed for few minutes.*
- *The mixture can be poured and spread with a notched trowel or applied by roller or airless spray at approximately 0.2kg to 0.3kg/m<sup>2</sup> in layers to the required thickness.*
- *Allow 8 to 10 hours between coats. If earlier coat has cured too long, rougher surface by sanding.*
- *For non-skid surface requirement, broadcast fine graded silica sand immediately after first coating of E400, sweep away excess sand after E400 has hardened. Apply second coat in usual way.*

#### PRODUCTION

*Finished coating shall be protected and allowed to cure for 7days.*

#### PRECAUTION

*Hychem E400 may cause rash on skin of some people, so immediately wash away E400, when come in contact with skin, with soap water.*

#### CLEANING

*The containers and tools used must be cleaned with solvents (for example, toluene, trichloroethylent and MEK) before the adhesive cures. Cured adhesive will not dissolve by solvents.*