

PRODUCT DATA

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Maintenance of
Concrete

EMACO[®] P24

Water-based epoxy-cementitious bonding agent and rebar coating

Description

Emaco[®] P24 is a water-based epoxy-cementitious bonding agent. It will bond concrete and mortar up to 24 hours after application. Emaco[®] P24 is also used to coat and protect rebar.

Yield

One unit of Emaco[®] P24 bonding agent will yield 2.7 mixed gallons (10.2 L). The coverage is 80 ft²/gallon (2.0 m²/L) at a thickness of 20 mils (0.5 mm).

Packaging

Emaco[®] P24 bonding agent is a 3-part system consisting of:

Part A:

0.42 gallons (1.6 L) epoxy resin

Part B:

0.42 gallons (1.6 L) epoxy hardener

Part C:

31 lbs (14.1 kg) cementitious component

Shelf Life

1 year when properly stored

Storage

Store in unopened containers at 60 to 80° F (16 to 27° C) in clean, dry conditions. If Part A or Part B freeze, discard.

Features

- 24-hour window for topping application
- VOC compliant
- Integral corrosion inhibitor
- High alkalinity similar to concrete
- Premeasured units
- Open time 24 hours
- Blue color

Benefits

- Provides jobsite flexibility
- Environmentally friendly
- Additional protection for reinforcing steel
- Compatible with cementitious materials
- No measuring required
- Allows flexibility in forming and pouring procedures
- Facilitates proper coverage

Where to Use

APPLICATION

- Bonding plastic concrete to hardened concrete
- Coating steel rebar to protect against corrosion
- Areas where short open times prevent the use of traditional epoxies

How to Apply

Surface Preparation

1. Remove deteriorated concrete around rusting rebar to expose sound concrete. The clean substrate must be alkaline (pH above 9.5) and free of harmful salts, oil, rust, dust, and other contaminants.
2. Remove rust and mill scale by gritblasting. Blast steel to white metal. Follow gritblasting with vacuuming or oil-free dry-air blast (refer to SSPC-SP-10 or NACE-2).
3. The surface should be saturated surface-dry (SSD) without any standing water.
4. For additional information, refer to International Concrete Repair Institute (ICRI) Surface Preparation Guidelines for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation (No. 03730).

Mixing

Pour contents of Part A and Part B into a clean mixing bucket and blend the 2 components for 2 minutes. Slowly add all of Part C. Never add water. Use a Jiffy paddle and a drill to properly mix the product.

NOTE: Mix the entire unit; do not mix partial units.

Application

Apply with a stiff-bristled broom or sprayer. With any method, be sure to work the bonding agent thoroughly into the substrate. When Emaco[®] P24 is used as a bonding agent, the appropriate thickness is 20 mils (0.5 mm); when used for reinforcement protection, the minimum thickness is 20 mils (0.5 mm) (2 coats of 10 mils [0.25 mm] each). Keep bonding agent protected in direct sunlight and in temperatures above 95° F (35° C).

Clean Up

Clean up with soap and water. Dried material must be removed mechanically.

Technical Data

Composition

Emaco® P24 is a water-based epoxy-cementitious bonding agent.

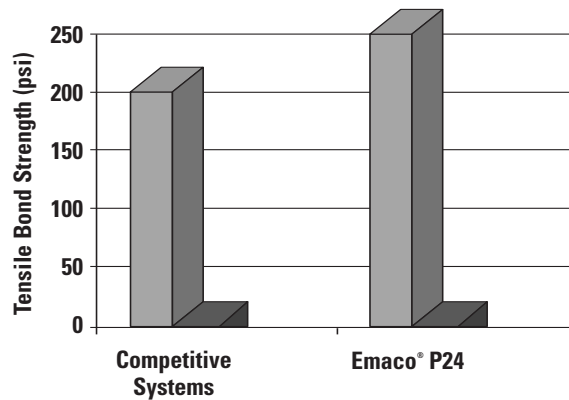
Test Data

PROPERTY	RESULTS	TEST METHODS
Pot life , mixed 150 g, min, at 72° F (22° C)	90	
Working time , min, at 72° F (22° C)	30	
Compressive strength , psi (MPa), 28 days	8,000 (55.2)	ASTM C 109
Flexural strength , psi (MPa), 28 days	1,000 (6.9)	ASTM C 348
Tensile bond strength , 14 days		ACI 503R
Open time, hrs	Psi (MPa)	
2	> 200 (1.4)	
9	> 200 (1.4)	
24	> 200 (1.4)	
Slant shear bond , 14 days		ASTM 882
Open time, hrs	Psi (MPa)	
2	> 3,000 (20.7)	
9	> 2,500 (17.2)	
24	> 2,000 (13.7)	
Splitting tensile , psi (MPa), 28 days	1,000 (6.9)	ASTM C 496

Test results are averages obtained under laboratory conditions. Expect reasonable variations.

Tensile Bond Strength

According to ACI 503R at 28 days,
 Topping applied 12 hours after Emaco® P24.



For Best Performance

- Substrate and ambient temperature must be from 40 to 95° F (4 to 35° C).
- When Emaco® P24 is used as a bonding agent for overlays or toppings, obtain best results by topping within 6 hours of application.
- Precondition these materials to approximately 70° F (21° C) for 24 hours before using.
- This product comes in premeasured kits; do not add extra water.
- Protect from direct sunlight, wind, and other conditions that could cause rapid drying of material.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

EMACO® P24 PART A RESIN

Warning

Emaco® P24 Part A Resin contains epoxy resin and petroleum derivative.

Risks

May cause skin, eye, and respiratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container closed when not in use. Wash thoroughly after handling. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state, and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L less water and exempt solvents when components are mixed and applied per manufacturer's instructions.

EMACO® P24 PART B HARDENER

Danger — Corrosive

Emaco® P24 Part B Hardener contains aliphatic amines.

Risks

Contact with skin or eyes may cause burns. Ingestion may cause irritation and burns of mouth, throat, and stomach. Inhalation of vapors may cause irritation and intoxication with headaches, dizziness, and nausea. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. DO NOT get in eyes, on skin or clothing. Wash thoroughly after handling. Keep container closed. DO NOT take internally. Use only with adequate ventilation. DO NOT breathe vapors. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state, and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product does not knowingly contain materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L less water and exempt solvents when components are mixed and applied per manufacturer's instructions.

EMACO® P24 PART C

Warning

Emaco® P24 Part C contains silica, crystalline quartz, Portland cement, iron oxide, silica (amorphous), anhydrite, magnesium oxide, and calcium oxide.

Risks

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains small amount of free respirable quartz which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with skin, eyes, and clothing. Prevent inhalation of dust. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state, and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

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**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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