



# THE EUCLID CHEMICAL COMPANY

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## EUCO #456S MORTAR

### IRON AGGREGATE EPOXY MORTAR SYSTEM

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**EUCO #456S MORTAR** is an epoxy repair material for use where exceptional strength and toughness are needed. It consists of a two component epoxy resin system and a specially processed graded iron aggregate. EUCO #456S MORTAR has excellent adhesion and provides maximum abrasion and impact resistance on floors with extra heavy duty traffic.

#### PRIMARY APPLICATIONS

- Floor joint repairs
- Floor overlays
- New installations to armor floor surfaces
- Floor areas subject to cutting from steel flanges
- High impact and manipulating areas in steel mills
- Patching metallic floors
- Areas needing superior abrasion resistance

#### FEATURES / BENEFITS

- The most durable topping available for high impact and abrasion conditions
- Fast and economical repair system
- Excellent bonding to most construction materials
- Extremely high early strengths
- Solvent free and V.O.C. compliant-100% solids

#### SPECIFICATIONS / COMPLIANCES

- ASTM C-881-87, Type II & IV, Grade 1 Class B & C

#### PACKAGING / YIELD

	<u>0.35 ft<sup>3</sup> (0.01 m<sup>3</sup>)</u>	<u>1.40 ft<sup>3</sup> (0.04 m<sup>3</sup>)</u>
Part A resin	0.90 gal (3.4 L)	3.6 gal (13.6 L)
Part B hardener	0.225 gal (0.85 L)	0.9 gal (3.4 L)
Part C* aggregate	75 lb 3/50 lb	(34 kg) (22.7kg) bags

\*Eucopoly-S Trowel Grade Iron Aggregate

**EUCO #456 PRIMER, SEALER is packaged in 1.125 gal (4.26 liter) and 4.5 gal (17.0 liter) units.**

#### TECHNICAL INFORMATION

##### **Typical Engineering Data**

The following information was developed under laboratory conditions.

<b>Working time</b>	<b>Temperature</b>
30 minutes	90°F (32°C)
75 minutes	75°F (24°C)
90 minutes	60°F (16°C)

##### **Compressive Strength**

ASTM C109 2" (50 mm) cubes	
1 day	12,000 psi (83 MPa)
3 days	12,500 psi (86 MPa)
7 days	13,000 psi (90 MPa)
14 days	13,500 psi (93 MPa)

##### **Bond Strength** ASTM C882

2,200 psi (15 MPa)

##### **Abrasion Resistance** ASTM C779 Procedure A

	<u>EUCO 456S</u>	<u>Plain Concrete</u>
30 minutes:	0.008" (.20 mm)	.048" (1.22 mm)
60 minutes:	0.013" (.33 mm)	.102" (2.59 mm)

Maximum Continuous

Service Temperature: 170°F (77°C)

##### **Appearance**

EUCO #456S MORTAR will appear as a dark metallic gray surface when applied over a concrete floor. It is not intended to be used as a decorative overlay.

##### **COVERAGE**

	<u>Kit Size</u>	
<u>Thickness</u>	<u>0.35 ft<sup>3</sup> (0.01 m<sup>3</sup>)</u>	<u>1.40 ft<sup>3</sup> (0.04 m<sup>3</sup>)</u>
1/4" (6 mm)	16.8 ft <sup>2</sup> (1.6 m <sup>2</sup> )	67.2 ft <sup>2</sup> (6.2 m <sup>2</sup> )
1/2" (13 mm)	8.4 ft <sup>2</sup> (0.8 m <sup>2</sup> )	33.6 ft <sup>2</sup> (3.1 m <sup>2</sup> )

	<u>Rough surface</u>	<u>Smooth surface</u>
<b>Primer/Sealer</b>	60-80 ft <sup>2</sup> /gal	100-150 ft <sup>2</sup> /gal
<b>Application</b>	(1.5-2.0 m <sup>2</sup> /L)	(2.5-3.7m <sup>2</sup> /L)

## **DIRECTIONS FOR USE**

**Surface Preparation**-New concrete must be a minimum of 28 days old and possess an open surface texture with all curing compounds and sealers removed. Old concrete must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a scabblor, bushhammer, shotblast or scarifier which will give a surface profile of a minimum 1/8" (3 mm) and expose the large aggregate of the concrete. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

**Joints and Edges**-Edges should be sawcut to 1/4" (6 mm) more than the overlay thickness and notched at the edge of the overlay to provide a locked edge. Chip the edge with a hand held chipping hammer to provide the wedge shaped notch. Moving joints as in the case of expansion joints should be brought up through the overlay by sawcutting or with the use of a divider strip. All cracks over 1/16" (2 mm) wide should be routed out to a 1/4" (6 mm) width and 1/4" (6 mm) depth prior to application of the mortar.

**Priming**-The surface must be primed with EUCO #456 PRIMER, SEALER. After the concrete surface has been prepared as indicated above, apply the primer at the recommended coverage rate. Rougher surfaces may require a stiff broom to apply the primer while a relatively smooth, shotblasted surface will allow use of roller application.

**Mixing**-All materials should be in the proper temperature range of 60°F (16°C) to 90°F (32°C). Mix parts A and B (resin & hardener) for 2 minutes using a drill and mixing prop. For ease of mixing, add the Part B to the Part A (not the reverse). The epoxy must be well mixed to ensure proper chemical reaction. Add Part C (iron aggregate). Mix for an additional 2 minutes or until all aggregate pieces are completely covered by the epoxy. For large placements, mix the epoxy separately in a 5 gallon pail then mix the epoxy and aggregate together in a mortar mixer.

Place immediately.

**Placement**-Discharge material from mixer and place on to floor. For large overlays, use of vibratory screed is strongly recommended to maximize product density and ultimate performance. Finish by machine trowel. For patching, spread with a trowel, come-a-long, or square tipped shovel to a thickness of about 1/8" (3 mm) higher than the final desired height of the overlay.

Compact and finish by hand or machine trowel.

**Sealing**-If desired, the surface may be sealed or topcoated with EUCO #456 PRIMER, SEALER. See "Coverage" for quantity requirements.

Additional performance can be achieved by topcoating with EUCOTHANE. Consult individual technical data sheets for specific chemical resistance information.

Shelf life is 2 years in original, unopened package.

## **CLEAN-UP**

Clean tools and equipment with solvent such as EUCO SOLVENT, xylene, xylol, toluene or MEK. Do not allow the epoxy to harden on equipment.

## **PRECAUTIONS / LIMITATIONS**

- Interior use only.
- Not recommended where floor temperature will exceed 170°F (77°C) on a continual basis.
- Keep at room temperature 60-70°F (16-21°C) 24 hours prior to use for ease of product placement.
- Not suitable for use where the topping will be exposed to acids.

Form Euco #456S Mortar-9.99

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