westcoat™
SPECIALTY COATING SYSTEMS

PRODUCT SPECIFICATION

EC EPOXY COAT
DURABLE RESINS & HARDENERS

EC-31 Epoxy Clear Topcoat

Description

Westcoat EC-31 Epoxy Clear Topcoat is a two-component, 100% solids, high-build, low viscosity, low odor, cyclo-aliphatic, chemical resistant epoxy. This highly versatile epoxy coating comes in clear.

Uses

EC-31 epoxy is used to create industrial seamless floors in manufacturing plants, mechanical rooms, warehouses, commercial kitchens, and residential garages. In combination with color quartz or paint chips it can be used to create a decorative floor coating. Westcoat EC-31 Epoxy (with aggregate) can also be used as a mortar for overlays or repairs for concrete. EC-31 Clear is an excellent high build concrete sealer for interior use over many other types of coatings such Texture Crete or over acid stained floors. EC-31 can be applied directly to the concrete without a special primer.

Advantages

- Meets USDA Critera
- 100% Solids
- Low Viscosity
- Chemical Resistant
- High Strength
- Water Clear or Pigmented
- Durable yet Flexible
- Low Odor
- High Build
- Superior Adhesion

Packaging

1½ and 15 gallon kits

Color

Clear

INSPECTION / PREPARATION

Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper adhesion. The concrete should be at least 2500 psi and feel like 30-grit sandpaper. The concrete should be porous and be able to absorb water. A minimum of 28 days cured is required on all concrete. Before starting flooring work, test existing concrete slab for efflorescence, moisture, and hydrostatic pressure.

Preparation

Pre-cut and clean all cracks and joints with a concrete diamond blade to at least ¼ x ¼ inch. Prepare concrete to a profile equal to 30 or 50, grit sandpaper. You may mechanically profile by grinding, shot blasting, scarifying or water blasting. Methods may vary according to the thickness of the coating to be applied, and the condition and hardness of the concrete. Other factors include the forecasted use of the surface and the environment in which it is to be installed. When preparing the surface use caution when shot blasting around pools, scarifying too aggressively, grinding marks or grinding too smooth. Over existing Epoxy: Sand the surface with a floor buffer and 80 grit sand paper, remove debris and wipe with denatured alcohol or acetone just before new application.

Moisture

All concrete should be tested for moisture before applying a seamless coating. Water vapor transmission upwards through on-grade concrete slabs may result in loosening of epoxy floors or improper curing of epoxy materials. If moisture emissions exceed 3 lbs./1000 sq ft. contact the manufacturer before application.

APPLICATION

Mixing

As a coating, premix each component separately. Mix 2 parts A with 1 part B, by volume of EC-31, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing. After mixing is completed, remove from container within 5 minutes, as epoxy will begin to generate heat. Spread immediately onto the floor, as product is spread out you will have longer working time (10-15 minutes at 70 degrees). For an Epoxy Mortar: Mix 2 to 5 parts of a washed and kiln dried aggregate, by volume, to 1 part of mixed Westcoat EC-31 and mix until uniform in consistency.

Thinning

The product may be thinned with acetone in which case it must be applied thinly enough to allow solvent to escape (minimum 300 sf per gallon). Typically 1 pint to 2 quarts of acetone.

Coverage

Coverage will vary depending on condition of surface and desired thickness.

As a Primer: 300-400 sf per gallon after thinning 20% with acetone

As a Coating: 100-300 sf per gallon

For Epoxy Mortar: 1 gallon of epoxy mixed with 5 gallons of sand will yield approximately 3 to 4 gallons of mortar.

Applying Product

Prime the surface using EC-12 (thinned with 10% acetone), or EC-11 (thinned with water). Read individual Product Specication Sheets. The EC-31 may also be used as a primer when thinned 10% with acetone. Primer coat should be applied thinly and worked into the surface to help seal and avoid pinholes.

As a coating, apply EC-31 within 24 hours after the primer coat. Immediately after mixing, spread a strip of the batch onto the surface along the edges where it will be "cut in" using a brush. Pour the remaining material near the "cut in" area and spread evenly using a trowel or squeegee and back roll using a 1/4" nap non-shedding roller. A notched trowel or squeegee will help regulate the thickness and a porcupine roller will help to release trapped air and minimize bubbles. Depending on the look, thickness, chemical, and abrasion resistance desired, 1 to 2 coats may be applied. A non-skid surface can be achieved by broadcasting and/or back rolling a washed and kiln dried aggregate into the coating.

For an epoxy mortar: Prime the area with a neat (no sand added) batch of EC-12, or EC-11 primer. Within 24 hours, apply the prepared mortar using a trowel.

Dry Time

You may re-coat as soon as the surface is dry to touch or in about 8-10 hours (but not later than 48 hours). Light foot traffic may be permitted in 24 hours, heavy foot traffic in 48 hours, vehicular traffic in 72 hours. All times are based on average temperature of 70 degrees and 50% humidity. Cooler temperatures will increase drying time.

Clean Up

Uncured material should be removed with an environmentally-safe solvent. Cured material should be removed mechanically.

LIMITATIONS

- Do not install if the temperature is below 50°F or above 95°F.
- Concrete must be cured for a minimum of 28.
- For interior use only unless protected by a UV resistant coating such as urethane.
- Do not apply over concrete under hydrostatic pressure.
- After mixing completely (3-4 minutes remove from mixing container an apply to floor).
- Solvents added to thin such as acetone will make product combustible or flammable in which case be aware of sparks or open flame.
- If solvent is added, the products must be applied thinly to allow the solvent to escape for proper curing will to occur.
- Do not allow any Westcoat products to FREEZE.

HEALTH PRECAUTIONS

Inhalation of vapor or mist can cause headache, nausea irritation of nose, throat, and lungs. Prolonged or repeated skin contact can cause slight skin irritation.

DISCLAIMER

PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST THE MANUFACTURER OF WESTCOAT, SHALL BE LIMITED SOLELY TO THE REPLACEMENT OF ANY DEFECTIVE MATERIAL OR A PAYMENT BY THE MANUFACTURER IN AN AMOUNT EQUAL TO THE COST OF THE ORIGINAL MATERIAL.

TECHNICAL DATA

Viscosity (ASTM-D-445-83, Brookfield, RVTD, Sprindle 4)	1030 cps
Gel Time (Techne GT-4 Gelation Timer)	55 (150 mass/min)
Tensile Strength (ASTM-D-638-86)	7,250 psi.
Tensile Modulus	385,000 psi
Tensile Elongation (ASTM-D-638-86)	5.5 %
Heat Deflection at 264 psi (ASTM-D-648)*	47 C°
Shore D Hardness (ASTM-D-2240-86) *	81
Abrasion Resistance @ 1000 cycles Wt. Loss (gms)	0.0041
Mar Resistance (ASTM-D-5178-91)	1.30 kg
Pencil Hardness	2H
Impact, inches-lbs Direct/Reverse	14/1
Glass Transition Temperature (ASTM-D-3418-82)	124 F°
Color (ASTM-D-1544-80)	>1 Gardner
Thin Film Set Times at 70 F (BK Drying Recorder)	6 hrs.

Flexural Strength (ASTM-D-790-88)	12,185 psi.
Flexural Modulus	445,00 psi.
Cross Hatch Adhesion (0-Worst, 5-Best)	4
Compressive Strength at yield (ASTM 695-85)	11,550 psi.
Compressive Modulus (ASTM 695-85)	370,000 psi.
Glass Transition	46 C°
Chemical Composition	Modified Bisphenol A epoxy resin crosslinked with aliphatic and cycloaliphatic polyamines

*Properties determined after 7 days cure at 25 C°