EUCOTHANE

Concrete and Metal Protective Polyurethane Coating

EUCLID CHEMICAL

Description

EUCOTHANE is a two component, solvent based, polyester/aliphatic polyurethane coating that offers outstanding abrasion resistance, excellent flexibility, color stability and weather resistant characteristics. It offers very good chemical resistance without compromising on aesthetics. Ideal as a topcoat for most Euclid Chemical epoxy, urethane and some masonry coatings, EUCOTHANE provides excellent anti-graffiti properties.

Primary Applications

- Airport hangar floors
- Manufacturing plants
- Bridge structures
- Laboratories
- Clean rooms
- Warehouses
- Truck/auto repair bays
- Walls/floors

Features / Benefits

- Excellent cleanability
- Good chemical resistance
- Anti-graffiti coating

Technical Information

Material Properties @75°F (24°C) - 50% RH	
Mix ratio (A:B) by volume	2 to 1
VOC Content (Clear Gloss, Colors)	335 g/L
VOC Content (Clear Satin)	447 g/L
Viscosity, mixed cp	200 to 600
Mixed solids % by wt	
70% (colors), 60% (clear gloss), 54% (clear satin)	
Pot life (1.5 gal volume)	2 to 4 hours
Hardness, Shore D	62
Tack Free Time	4 to 6 hours
Light Foot Traffic	14 - 24 hours
Final Cure/Heavy Traffic	3 to 5 days
Flexibility 3.2 mm Mandrel	No cracks
Taber Abrasion	
CS17 wheel, 1000 g load, 500 cycles	22 mg loss
Impact Resistance	
Gardner Impact, 160 in/lb	Passes

Values presented are typical and not necessarily referenced to create specifications.

Appearance: Light Gray, Concrete Gray, Dark Gray, Tile Red, White, Black, Tan, Clear Gloss and Clear Satin are standard colors. Special or custom colors are available subject to minimum quantity orders.

Chemical Resistance

ACIDS	RATING
Acetic Acid 5%	2
Citric Acid 5%	3
Hydrochloric 10%	3
Nitric Acid 5%	3
Phosphoric 20%	3
Sulfuric 10%	3
SOLVENTS	
Ethyl Alcohol 95%	3
Ethyl Acetate	NR
Methanol	1
Methyl Ethyl Ketone	NR
Mineral Spirits	3
Methylene Chloride	NR
Toluene	2
Xylene	3
Trichloroethane	2
Isopropyl Alcohol	1

MISCELLANEOUS	RATING
Detergent Solution	3
Ethylene Glycol	3
Propylene Glycol	3
Vegetable oil	3
Gasoline	3

1 = Incidental Contact (8 hours)
2 = Splash & Spill (72 hours)
3 = Extended Exposure (7 days)
D = Discoloration may occur
NR = Not Resistant

Packaging

EUCOTHANE is packaged in 11.3L cases.

Shelf Life

1 year in original, unopened package.

Coverage

7.4 to 12.3 m²/L

Note: Coverage rates are approximate. Actual coverage depends on temperature, texture, and substrate porosity.

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Directions for Use

Surface Preparation: The surface must be structurally sound, clean and free of grease, oil, curing compounds, soil, dust and other contaminants. See note in "Precautions/Limitations" section if coating is to be placed over old/existing epoxy or urethane coatings. New concrete and masonry must be at least 28 days old. Surface laitance must be removed. Concrete surfaces must be roughened and made absorptive, preferably by mechanical means, and then thoroughly cleaned of all dust and debris. If the surface was prepared by chemical means (acid etching), a water/baking soda or water/ammonia mixture, followed by a clean water rinse, must be used for cleaning, in order to neutralize the substrate. The Concrete Surface Profile (CSP) will be determined by the requirements of the epoxy coating applied before the EUCOTHANE application. Allow substrate to dry before coating application. Following surface preparation, the strength of the surface can be tested if quantitative results are required by project specifications. An elcometer or similar tensile pull tester may be used in accordance with ASTM D 4541, and the tensile pull-off strength should be at least 1.7 MPa.

Do not apply epoxy or urethane coatings if there is excessive moisture in the concrete or if the moisture vapor emission rate (MVER) is high. Before application of the coating, perform the "Visqueen test" (ASTM D 4263) to check if there is moisture present. If moisture is found to be present during the "Visqueen test", perform the "calcium chloride test" (ASTM F 1869) as a follow-up to determine the MVER. Contact Euclid Chemical if results indicate a MVER greater than 3.0 lbs. per 1,000 square feet per 24 hours. After surface preparation and moisture testing, a test section application of the coating system is recommended to confirm good adhesion and compatibility of the coating with the surface, and also to confirm appearance and aesthetics.

When coating steel, all contamination should be removed and the steel surface prepared to a "near white" finish (SSPC SP10) using clean, dry blasting media.

EUCOTHANE can not be applied directly to concrete. If an epoxy coating has not been applied, DURAPRIME WB, DURAL EPOXY PRIMER, or another Euclid Chemical epoxy coating must be used to prime concrete in accordance with the information provided on the technical data sheets.

Old or existing epoxy coatings should be cleaned and lightly sanded prior to application of EUCOTHANE as a seal coat. After sanding, solvent wipe the surface using acetone.

Mixing: Mix EUCOTHANE using a low-speed drill and a mixing paddle. Pre-mix Part A and Part B separately for approximately 1 minute each. Combine Part A and Part B in a 2 to 1 ratio by volume, then mix thoroughly for 3 to 5 minutes. Scrape the bottom and sides of the containers at least once during mixing. Do not scrape bottom or sides of the container once mixing operations have ceased; doing so may result in unmixed resin or hardener being applied to the substrate. Unmixed resin or hardener will not cure properly. Do not aerate the material during mixing. To keep aeration to a minimum, the recommended mixing paddles are #P1 or #P2 as found in ICRI Guideline 320.5R-2014.

Application: EUCOTHANE can be applied as soon as the previously-applied prime coat of epoxy is tack free, but no later than 18 hours after application of the prime coat. If more than 18 hours have elapsed, the epoxy prime coat should be cleaned and lightly sanded prior to application of EUCOTHANE. After sanding, solvent wipe the surface using acetone. Apply EUCOTHANE using short nap roller, brush, or spray. When spraying, proper safety precautions should be observed. Two coats of EUCOTHANE are recommended for most applications. The second coat can be applied after the first coat has become tack free, typically within 4 to 6 hours after application (at 24°C).

Where an anti-skid surface is desired for EUCOTHANE, broadcast approximately 2.4 to 4.9kg/m^2 of clean, dry aggregate into the first coat. When the first coat has cured, sweep off excess aggregate. Proceed with the second coat of EUCOTHANE to seal the surface. Tack free time for EUCOTHANE is 4 to 6 hours (at 24°C). EUCOTHANE requires 14 to 24 hours (at 24°C) to cure sufficiently for light to moderate traffic.

Graffiti Removal: Graffiti removal should not be attempted until at least 72 hours after EUCOTHANE application. Remove graffiti as soon as possible after the graffiti incident by working on small areas at a time. Use commercially available graffiti removers and apply in accordance with manufacturer's instructions.

Clean Up

Clean tools and application equipment immediately with acetone, xylene, or MEK. Clean spills or drips with the same solvents while still wet. Hardened EUCOTHANE will require mechanical abrasion for removal.

Precautions / Limitations

- Keep EUCOTHANE away from sparks, open flames, pilot lights, and other sources of ignition
- Provide adequate ventilation and ensure the use of proper protective and safety equipment during application
- If HVAC intake ducts will distribute solvent odor into adjoining areas of the building, care should be taken to block vents
- Keep EUCOTHANE containers closed tightly
- Store EUCOTHANE indoors, protected from moisture, at temperatures between 10°C and 32°C
- Surface and ambient temperature during coating applications should be between 10°C and 32°C
- Material temperatures should be at least 10°C and rising
- Do not apply EUCOTHANE if surface temperature is within 3°C of the dew point in the work area
- Working time and cure time will decrease as the temperature increases, and will increase as the temperature decreases
- Do not thin EUCOTHANE
- Do not apply EUCOTHANE to slabs on grade unless an uninterrupted vapor barrier has been installed under the slab
- Do not apply EUCOTHANE if the substrate is subject to excessive moisture vapor drive or hydrostatic pressure
- Depending on the condition of the substrate, minor surface defects can appear in the coating when applied. Proper surface prep, patching of substrate imperfections, and priming will ensure a better overall finish.
- If coating over old/existing epoxy or urethane coatings, or if more than 24 hours elapses between coats: sand the previous coat, wipe clean, and proceed with coating operations. If old/existing coatings are peeling, flaking, etc., all unsound material must be removed prior to new coating applications.
- Application of a test area is recommended to confirm final appearance and texture of the system with the end user
- EUCOTHANE is not intended for continuous immersion
- Concrete surfaces may darken and give a “wet look” effect after application
- Excessively high film thicknesses and/or moisture may cause surface blistering
- In all cases, consult the product Safety Data Sheet before usepressure

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