

SECTION (07 18 13)

PEDESTRIAN TRAFFIC COATING FOR CONCRETE AND STEEL

PART 1 GENERAL

1.1 SCOPE:

This Guideline will provide the necessary instructions and establish uniform procedures for the application of the ENDURO-FLEX KOTE waterproof system, to qualify for the Limited Warranty. The Guideline covers the installation of a waterproofing system which is trowel applied and designed to supply a positive seal from moisture penetration when applied over sound substrates.

1.2 MODIFICATIONS:

The methods involved may require modification to adjust to job site conditions, air temperature, and weather. Consult Enduro Products for specific design requirements.

1.3 CONCRETE AND EXTERIOR PORTLAND CEMENT MORTAR SUBSTRATES AND SURFACES:

- 1.31 Substrate shall be of sound structural grade, in accordance with A.C.I. (American Concrete Institute) 301 Specifications for Structural Concrete for Buildings, and shall have a steel-troweled, fine broom finish, free of loose particles, fins, ridges, voids, or air entraine holes. Do not install over on-grade slabs, slabs over unvented metal pans, or split slabs with buried membrane.
- 1.32 Concrete shall be sloped for drainage per the Code, and shall be cured a minimum of 28 days.
- 1.33 Surface must be free of curing agents, bond breakers, oil, grease, dust, or any foreign matter which will prevent proper bonding. Surface can be cleaned by water blasting.
- 1.34 Control joints and expansion joints shall have been installed at all known deck stress concentration points throughout the surface of the deck to control cracking caused by shrinkage and deflection.

1.4 STEEL SUBSTRATE AND SURFACES:

- 1.41 Steel surfaces shall be solidly backed by a rigid substrate and shall have sufficient rigidity to avoid excessive deflection. The surface must be roughened sufficiently to assure proper bonding, which may be obtained by sanding or grinding All dust, oil, grease, and any foreign matter must be removed from the surface.
- 1.42 Galvanized sheet metal flashing shall be bonderized, and shall be installed in accordance with applicable codes.

1.5 JOB SITE CONDITIONS:

- 1.51 Avoid application prior to or during inclement weather.
- 1.52 Normal application shall be limited to a temperature range between 50°F and 95°F.
- 1.53 If there are deficiencies in the structural integrity of any portion of the structure, which will affect the application of the ENDURO- FLEX KOTE System, the owner/general contractor shall be notified in writing, and corrections made, before application can proceed.

PART 2 QUALIFICATIONS

2.1 APPROVED APPLICATOR:

- 2.11 Applicator: Shall be regularly engaged and specializing, (for the preceding five years), in the application of similar materials and listed as an Approved Applicator by Enduro Products, and shall be a licensed contractor in the state where the work will be performed.
- 2.12 Submittals: Shall include a sample of the ENDURO-FLEX KOTE System. Submit Specifications and appropriate approvals as required.

PART 3 MATERIALS

The materials shall be delivered to the job site in the original sealed containers. The label shall bear the product name, manufacturer lot number, and precautionary labels. Applicator shall read and understand all Material Safety Data Sheets prior to using materials. All materials listed are manufactured and distributed by Enduro Products.

3.1 ENDURO-FLEX EFC-UL98 CEMENTITIOUS POWDER:

Packaged in 28 pound bags.

3.2 ENDURO-FLEX EFL-UL94 ACRYLIC POLYMER:

Dispersion: packaged 2 gallons in a 5 gallon container.

3.3 ENDURO-KOTE EKC CEMENTITIOUS MIX:

Packaged in 46 pound bags.

3.4 ENDURO-KOTE EKL ACRYLIC EMULSION:

Packaged in 5 gallon container.

3.5 ENDURO-KOTE EKS ACRYLIC COLOR COAT:

Packaged in 5 gallon container.

PART 4 APPLICATION

4.1 ENDURO-FLEX:

4.11 CONCRETE CRACK ISOLATION:

Prepare all minor cracks by routing out to 1/8-inch minimum in width and depth. Compress the Enduro-Flex mixture into the 1/8-inch routed area with a trowel and feather the Enduro-Flex into the adjacent substrate a minimum of two inches in each direction. Fiber glass reinforcement shall be alkali resistant, Type 111, Organic Resin Treated, per ASTM Standard Specification D1668. The trowel coat may follow after the surface is hard. (Major cracks should be treated as construction, expansion, control, or isolation joints. DO NOT bridge these types of joints).

4.12 MIXING:

The mixture consists of two gallons of EFL-UL94 Acrylic Polymer Dispersion and a 28 pound bag of EFC-UL98 Cementitious Powder, mixed in the 5 gallon container of EFL-UL94 Liquid.

4.13 TROWEL COAT:

Comb the Enduro-Flex mixture over the substrate with a "V" notched trowel. Trowel thoroughly until all voids and pin holes are closed and sealed, then smooth the mixture to a minimum average of 1/16-inch thick. Allow to cure a minimum of two hours, or until the surface is hard, depending on humidity and air temperature, before application of Enduro-Kote.

4.2 ENDURO-KOTE:

4.21 MIXING:

The mixture consists of one gallon of EKL Acrylic Emulsion and one 46 pound bag of EKC Cementitious Powder mixed in a 5 gallon container.

4.22 FIRST COAT:

Trowel the Enduro-Kote mixture over the Enduro-Flex to a minimum average thickness of 1/I6-inch. The next coat is applied when the surface is hard.

4.23 TEXTURE COAT:

Using the same mixture as the First Coat, spray the mixture with a Pattem Pistol and hopper, over the First Coat, and knock down with a trowel to a minimum average thickness of 1/I6-inch. The Enduro-Dek Architectural design or smooth finishes may substitute for the Texture Coat, providing the average thickness is no less than 1/16-inch. Allow a minimum air cure time of two hours before applying the color coat.

4.24 COLOR COAT:

Mixed Color Coat is applied by brush and roller over the Texture Coat or smooth finish in two coats. Under normal conditions, the second coat can be applied when the first coat is dry to the touch.

4.3 TOLERANCES:

4.31 The minimum average thickness of the Enduro-Flex Kote System shall not be less than 3/16-inch.

PART 5 METHOD OF REPAIR AND MAINTENANCE

5.1 REPAIR:

Excess cracking or fractures in the substrate may cause cracking on the ENDURO-FLEX KOTE surface. Repair may be accomplished as described in Item 4.11 "Concrete Crack Isolation". After the Enduro-Flex repair surface is hard, apply the Enduro-Kote as described in Section 4.2 Enduro-Kote Application.

5.2 MAINTENANCE:

Maintenance of the Enduro-Flex System is the responsibility of the ultimate user/owner. A copy of the Maintenance Policy and Procedure may be obtained from the Manufacturer or Approved Applicator.

PART 6 PEDESTRIAN TRAFFIC BETWEEN COATS

Light pedestrian traffic (depending on air temperature, humidity, etc.) may be allowed on the Enduro-Flex coat after the surface is hard. Light traffic may be allowed on the Enduro-Kote first coat, texture coat, and color coat, after approximately two hours cure time. However, the color coat should be given twenty-four hours cure time, before heavy pedestrian traffic is allowed. No traffic should be allowed on the completed system until the owner/contractor has given final approval of the Applicator's work.

PART 7 QUALITY ASSURANCE

- 7.1 ENDURO-FLEX KOTE is manufactured under a rigid in-house Quality Control Program, with follow-up inspections by an Independent Quality Control Agency.
- **7.2** Physical characteristics of materials used in the manufacturing process of ENDURO-KOTE and ENDURO-FLEX are certified by the material suppliers to be within the tolerances of the materials used for the original required testing procedures.

PART 8 LIMITED WARRANTY

The ENDURO-FLEX KOTE Waterproof System, guarantees water proofing performance for a period of "FIVE" Years from date of installation by an Approved Applicator. This Warranty is invalidated if failure is caused by misuse, mistreatment, faulty design, structural or seismic failure, improper application, deviations from specifications, or other circumstances beyond the control of Enduro Products. This Warranty covers waterproofing performance only, and in no event will Enduro Products be liable for incidental or consequential damages, nor shall liability, if any, extend beyond the purchase price of the material.





Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, as described in The Project Resource Manual—CSI Manual of Practice.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" when editing this section.

Section numbers [and titles] are from MasterFormat 1995 Edition, with numbers [and titles] from MasterFormat 2004 Edition in parentheses. Delete version not required.

SECTION 07180 (07 18 13) PEDESTRIAN TRAFFIC COATINGS

Specifier Notes: This section covers Enduro Products "Enduro-Flex Kote" waterproof system for concrete and steel. Consult Enduro Products for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

Specifier Notes: Edit the following sentence for concrete or steel substrate.

A. Pedestrian traffic coating applied to [concrete] [steel] substrate.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 03300 (03 30 00) Cast-in-Place Concrete.
- B. Section 07620 (07 62 00) Sheet Metal Flashing and Trim.
- C. Section 07920 (07 92 00) Joint Sealants.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM C 67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
- B. ASTM C 109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens).
- C. ASTM C 297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions.
- D. ASTM D 570 Standard Test Method for Water Absorption of Plastics.

- E. ASTM D 756 Practice for Determination of Weight and Shape Changes of Plastics Under Accelerated Service Conditions.
- F. ASTM D 1242 Standard Test Methods for Resistance of Plastic Materials to Abrasion.
- G. ASTM D 1499 Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics.

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- H. ASTM D 1668 Standard Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing.
- I. ASTM D 2299 Recommended Practice for Determining Relative Stain Resistance of Plastics.
- J. ASTM E 108 Standard Test Methods for Fire Tests of Roof Coverings.
- K. ASTM G 152 Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials.
- L. City of Los Angeles Research Report RR 24842.
- M. ICC-ES Acceptance Criteria for Walking Decks AC39.
- N. UL 790 Standard for Standard Test Methods for Fire Tests of Roof Coverings.
- O. ASTM D-3746 Impact Test.

1.4 PERFORMANCE REQUIREMENTS

- A. Performance Requirements of Exposed Surface: Provide fire-retardant, waterproof, wearing surface for pedestrian traffic complying with ICC-ES Acceptance Criteria for Walking Decks AC39 and having following cured-state characteristics:
 - 1. Weatherometer Test, ASTM D 1499 and G 152, Model D or H, 2,000 Hours: No crazing, cracking, spalling, softening, or other surface deterioration.
 - 2. Accelerated Aging Test, ASTM D 756, Procedures D and E, 6 Cycles, and Procedures D, E, and F, 25 Cycles: Passed bond strength test.
 - 3. Fire Retardancy, ASTM E 108 and UL 790: Class A rating.
 - 4. Bond Strength, ASTM C 297:
 - a. After Accelerated Aging Test, ASTM D 756, Procedures D and E, 6 Cycles: Average 83 psi minimum.
 - b. After Accelerated Aging Test, ASTM D 756, Procedures D, E, and F, 25 Cycles: Average 82 psi minimum.
 - c. After Freeze Thaw Test, ASTM C 67: Average 104 psi minimum.
 - 5. Abrasion Resistance Test, ASTM D 1242, Method A: Did not exceed maximum loss in thickness allowed.
 - 6. Percolation: No noticeable leakage on each of 5 test specimens.
 - 7. Water Absorption Test, ASTM D 570: 8.7 percent by weight.
 - 8. Chemical Resistance Test, ASTM D 2299:
 - a. Unaffected By: Industrial detergent 20 percent solution, ammonia 5 percent solution, salt 20 percent solution, anti-freeze, kerosene, turpentine, and paint thinner.
 - b. Superficially Affected By: Chlorine 10 percent solution and sulfuric acid 3 percent solution.
 - c. Moderately Affected By: Muriatic acid 10 percent solution.
 - 9. Freeze Thaw Test, ASTM C 67: No breakage, weight loss, cracking, crazing, or delamination.
 - 10. Concentrated Load, Average Residual Indentation: 0.009 inch.
 - 11. Wind Uplift: Meets ICC-ES requirements for bond strength tests, after accelerated aging and freeze thaw tests.
 - 12. Compressive Strength Test, ASTM C 109: 5,450 psi.
 - 13. Impact Test ASTM D-3746 (Passed No Cracking or Splitting).
- B. Performance Requirements of Underlayment:
 - 1. Bond Strength, ASTM C 297, Average 5 Specimens Each:
 - a. Flatwise Tension to Concrete: 110 psi.
 - b. Flatwise Tension to Metal: 115 psi.
 - 2. Controlled Rate Crack Bridging Test, elongation measured in tension at separation rate of 0.015 inch per minute, average 5 specimens: 748 percent.

1.5 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including surface preparation and application instructions.

C. Samples:

- 1. Submit manufacturer's standard color chart for selection of color.
- 2. Submit manufacturer's samples of pedestrian traffic coating, minimum 4 inches by 9 inches.
- D. Quality Assurance: Submit Technical Data.
- E. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- F. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- G. Warranty: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for preceding 10 years, in manufacture of pedestrian traffic coatings of similar physical characteristics to those specified.
- B. Applicator's Qualifications:
 - 1. Applicator regularly engaged, for preceding 5 years, in application of similar materials to those specified.
 - 2. Approved by manufacturer.

Specifier Notes: Edit pre-application meeting as required for the project.

- D. Pre-application Meeting:
 - 1. Convene pre-application meeting before start of application of pedestrian traffic coating.
 - 2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and applicator.
 - 3. Review examination, preparation, mixing, application, protection, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating the following on each container:
 - 1. Product name.
 - 2. Manufacturer.
 - 3. Material batch or lot number.
- B. Storage: Store materials in clean, dry area indoors, off ground, in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and application to prevent contamination or damage.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. When applying pedestrian traffic coating at air temperatures below 50° F or above 95° F, contact manufacturer regarding additives to be added in mixing liquids.
- B. Do not apply pedestrian traffic coating for 24 hours before or during rainy weather.

1.9 WARRANTY

A. Warranty Period for Waterproofing Performance: 5 years from date of installation.

PART 2 **PRODUCTS**

2.1 MANUFACTURER

A. Enduro Products, 1133 N. Patt Street, Anaheim, California 92801. Phone (714) 526-5898. Fax (714) 526-6511. Website www.endurokote.com. E-mail info@endurokote.com.

2.2 PEDESTRIAN TRAFFIC COATINGS

- A. Pedestrian Traffic Coating: Enduro-Flex Kote waterproof system for concrete and steel.
 - 1. Cementitious Powder: Enduro-Flex EFC-UL98 Cementitious Powder.
 - 2. Acrylic Polymer Dispersion: Enduro-Flex EFL-UL94 Acrylic Polymer Dispersion.
 - 3. Cementitious Mix: Enduro-Kote EKC Cementitious Mix.
 - 4. Acrylic Emulsion: Enduro-Kote EKL Acrylic Emulsion.
 - 5. Acrylic Color Coat: Enduro-Kote EKS Acrylic Color Coat.

2.3. ACCESSORIES

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to concrete substrate.

A. Fiber Glass Reinforcement: ASTM D 1668, Type 111, organic resin treated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive pedestrian traffic coating.
 - 1. Verify deck will drain properly, without low spots or high fascia edges.
 - 2. Verify bonderized, galvanized sheet metal flashing at perimeter is as specified in Section 07620 (07 62 00), with joints and seams caulked as specified in Section 07920 (07 92 00).
 - 3. Verify plastic drains are not used.

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to concrete substrate.

B. Concrete Substrate:

- 1. Verify concrete is as specified in Section 03300 (03 30 00).
- 2. Verify concrete is clean, dry, and sound, with steel-troweled, fine-broom finish.
- 3. Verify concrete surface is free of loose particles, fins, ridges, voids, and air-entrained holes.
- 4. Verify concrete is properly sloped for drainage.
- 5. Verify concrete is cured a minimum of 28 days.

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to steel substrate.

- C. Steel Substrate: Verify steel surfaces are backed with rigid substrate with sufficient rigidity to avoid excessive deflection.
- D. Notify Architect of conditions that would adversely affect application or subsequent use.
- E. Do not begin surface preparation or application until unacceptable conditions are corrected.

3.2 PREPARATION

- A. Protection: Protect adjacent surfaces from contact with pedestrian traffic coating.
- B. Prepare surfaces to receive pedestrian traffic coating in accordance with manufacturer's instructions.

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to concrete substrate.

C. Concrete Substrate: Remove dirt, dust, debris, oil, grease, curing agents, bond breakers, and other surface contaminants which could adversely affect application of pedestrian traffic coating.

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to steel substrate.

- D. Steel Substrate:
 - 1. Roughen surfaces sufficiently to ensure proper bonding.
 - 2. Remove dirt, dust, debris, oil, grease, and other surface contaminants which could adversely affect application of pedestrian traffic coating.

3.3 MIXING

A. Mix materials in accordance with manufacturer's instructions.

3.4 APPLICATION

A. Apply pedestrian traffic coating in accordance with manufacturer's instructions at locations indicated on the Drawings.

Specifier Notes: Include the following paragraph when applying pedestrian traffic coating to concrete substrate.

- B. Concrete Crack Isolation:
 - 1. Prepare minor cracks by routing out to a minimum of 1/8 inch in width and depth.
 - 2. Compress Enduro-Flex mixture into routed area and feather into adjacent substrate a minimum of 2 inches in each direction.
 - 3. Apply fiber glass reinforcement in accordance with manufacturer's instructions.
 - 4. Treat major cracks as construction, expansion, control, or isolation joints. Do not bridge these joints with pedestrian traffic coating.
- C. Pedestrian Traffic Coating:
 - 1. First Coat:
 - a. Trowel mixture until voids and pin holes are closed and sealed.
 - b. Minimum Thickness: 1/16 inch.
 - 2. Second Coat:
 - a. Trowel over first coat.
 - b. Minimum Thickness: 1/16 inch.
 - 3. Finish Coat:

Specifier Notes: Specify texture, smooth, or decorative finish coat.

- a. Texture Coat: Spray mixture uniformly over second coat to achieve surface texture equal to samples accepted by Architect.
- b. Apply smooth or decorative finish coat over second coat to achieve finish coat equal to samples accepted by Architect. Smooth coat shall meet standards for non-skid surface.
- c. Minimum Thickness: 1/16 inch.
- 4. Color Coat: Apply 2 uniform coats of color coat over finish coat.
- 5. Minimum Thickness of Completed Pedestrian Traffic Coating: 3/16 inch.

3.5 PROTECTION

- A. Protect completed pedestrian traffic coating from pedestrian traffic for a minimum of 24 hours after application of color coat.
- B. Protect completed pedestrian traffic coating from damage during construction and from continuous contact with solvents.





ENDURO-KOTE Cement

1. Description:

EP ENDURO-KOTE Cement is a two component premixed uniform blend of portland cements and graded washed silica aggregates with a liquid polymer modifier. Suitable for interior or exterior use, this waterproof topping compound can be used for renovation and new construction. The system components are ENDURO-KOTE Cementitious Mix (EKC) and ENDURO-KOTE Emulsion (EKL).

2. Uses:

EP ENDURO-KOTE Cement is designed for use on the following: As a class "A" waterproof traffic coating for roofs and exterior decks, and as a wearing surface for the EP ENDURO-KOTE XL, EP ENDURO-FLEXKOTE and EP ENDURO-LASTIC Traffic Coating Systems. EP ENDURO-KOTE Cement may also be used to repair concrete slabs, parking decks, and for leveling or creating pitch to drains.

3. Surface Preparation:

All substrates to receive EP ENDURO-KOTE Cement should be of sound structural grade, clean and free of dust, oil, grease, sealers, curing compounds, laitance, release agents or other surface contaminants. For best results, apply mechanical abrasion by bead blast or mechanical grinding of the concrete surface. Remove any loose dust or dirt by vacuum cleaning. The cleaning and preparation method selected depends on both the substrate and its condition. When applying as part of the EP ENDURO-KOTE, EP ENDURO-FLEXKOTE or EP ENDURO-LASTIC Traffic Coating Systems follow the application procedure as laid out in each respective application guideline. Concrete should be completely dry to promote optimum adhesion. Consult Enduro Products regarding methods for checking moisture content of concrete. When EP ENDURO-KOTE Cement is to be applied on surfaces other than concrete (i.e., wood, metal, terrazzo, gypsum underlayments, etc.), consult

Enduro Products for recommended preparation.

4. Mixing:

Mix EP ENDURO-KOTE Cement is mixed by adding the ENDURO-KOTE Emulsion (EKL) at a rate of approximately 1-gallon for each 46-lb. bag of ENDURO-KOTE Cementitious Mix (EKC). The EKL polymer should be added to the mixing container first, then the EKC Powder. Use a mortar mixing paddle with a low speed drill (400-500 rpm) to mix thoroughly until the cementitious mix has a smooth homogeneous texture. Do not add any EKL polymer after the EP ENDURO-KOTE Cement has started setting up. The pot life per batch is approximately 15 to 20 minutes depending on the temperature.

5. Packaging:

EP ENDURO-KOTE Cement components are available as follows: ENDURO-KOTE Cementitious Mix (EKC) in 46-lb. bags and ENDURO-KOTE Emulsion (EKL) in 1 gallon containers and 5 gallon pails.

6. Application:

Apply EP ENDURO-KOTE Cement with a trowel or straight edge, trowel to desired texture, on the prepared surface. EP ENDURO-KOTE Cement may also be used to create a knock down splatter texture. Should a broom finish be desired, do so after placement. Do not add or spray polymer onto the surface for finishing, it may cause the surface to spall. Rough spots or trowel marks may be sanded off the surface, using a medium to fine grit sandpaper after the EP ENDURO-KOTE Cement has setup. Sanding should be accomplished no later than 24 hours after application. Allow an adequate curing time before applying a sealer, by using a latex or a water based concrete sealer (surface or penetrating). When EP ENDURO-KOTE Cement is going to be a wearing surface, a sealer or coating is recommended.

7. Coverage:

Refer to the application guideline for EP ENDURO-KOTE XL, EP ENDURO-FLEXKOTE, and EP ENDURO UT for specific coverage rates when EP ENDURO-KOTE Cement is used as a traffic coating.

8. Limitations:

Avoid application prior to or during moist or inclement weather. Normal application shall be limited to a temperature range of 50 to 95 degrees Fahrenheit. Plastic drains are to be avoided. Do not allow any of the Enduro Products to freeze.

9. Cleaning Instructions:

Uncured material can be removed with soap and water. If cured, material can only be removed mechanically. Clean up tools and equipment with soap and water after use.

10. Safety Health and Environmental Recommendations:

Provide proper ventilation. Avoid coating contact with skin and eyes. Use protective goggles and clothing. In case of eye contact, flood eyes with water and call a physician immediately. Wash hands thoroughly with soap and water after handling. Do not take internally. If ingested, call a physician immediately. Read the Material and Safety Data Sheet for EP ENDURO-KOTE Cement prior to handling or application as supplied by Enduro Products in California: (714) 526-5898, Fax (714) 526-6511; in Florida: (305) 591-8309, Fax (305) 591-8565; email: info@endurokote.com.

11. Warranty:

Enduro Products warrants its EP ENDURO-KOTE Cement to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Enduro Products makes no other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose with respect for Enduro Products. Enduro Products' sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of EP ENDURO-KOTE Cement proven to be defective and Enduro Products shall not be liable for any loss or damage.

Technical Data

TEST	REFERENCE	RESULTS
Compression Strength	ASTM C109	5,325 psi
Abrasion Resistance	ASTM D 1242, Method A	Did not exceed maximum loss in thickness allowed
Water Absorption	ASTM D 570	8.7 percent by weight
Accelerated Aging	ASTM D 756, Procedures D & E, 6 Cycles	Passed bond strength test
Bond Strength (after)	ASTM C 297	Average 83 psi minimum
Accelerated Aging	Procedures D, E, & F, 25 Cycles	Passed bond strength test
Bond Strength (after)	ASTM C 297	Average 82 psi minimum
Freeze Thaw	ASTM C 67	No breakage, weight loss, cracking, crazing, or delamination
Bond Strength (after)	ASTM C 67	Average 104 psi minimum



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Technical Data Sheet

ENDURO-KOTE EKS Pedestrian Deck Coating

1. Description:

EP ENDURO-KOTE EKS Pedestrian Deck Coating is a high performance epoxy-fortified acrylic coating designed for interior and exterior use. It is a durable, abrasion resistant, fluid applied coating for pedestrian surfaces.

2. Uses:

EP ENDURO-KOTE EKS Pedestrian Deck Coating is designed for interior or exterior use on new or existing concrete, plywood or asphalt surfaces.

3. Surface Preparation:

3.1 Concrete: All concrete surfaces to receive EP ENDURO-KOTE EKS Pedestrian Deck Coating should be of sound structural grade. For best results, apply mechanical abrasion by bead or sandblast to the concrete surface. Follow with acid etching using a diluted solution of muriatic or phosphoric acid. Caution: Acids are dangerous if handled improperly. Follow acid label precautions carefully and dispose properly. If the concrete is extremely smooth, the etching process may require repeating. Follow the acid etching with a thorough TSP or other detergent cleaning and rinse with generous amounts of water. After drying, remove any loose dust or dirt by vacuum cleaning or further rinsing. Test for porosity prior to paint application. Concrete should be completely dry to promote optimum adhesion. To check for moisture in the concrete. follow ASTM 6263. All concrete surfaces must be clean, dry, and free of all foreign matter such as dirt. dust. oil mildew or other contaminants. Repair cracks and holes in the surface to be coated with appropriate patching materials.

3.2 Plywood: All plywood surfaces should be selected and installed in accordance with the requirements of the applicable building code. All contaminants and imperfections that may impair adhesion must be removed. Glossy or slick surfaces must be scuff sanded prior to coating.

All new plywood surfaces must be primed.

3.2 Asphalt: All asphalt surfaces must be clean, dry, and free of all foreign matter such as dirt, dust, oil mildew or other contaminants. The surface must be structurally sound. Repair cracks and holes in the surface to be coated with appropriate patching materials.

4. Mixing & Priming:

EP ENDURO-KOTE EKS Pedestrian Deck Coating should be used at package consistency. If thinning is required, use water sparingly. New plywood should be primed with EN-70 Primer which is a two part epoxy primer. Stir Part A. Stir Part B. Mix all of Part A with all of Part B for 2 to 3 minutes. The mixed primer should stay in the mixing container for 30 minutes before use. Prime substrate at a rate of 250-300 square feet per gallon with EN-70 Primer. Allow primer to dry until it is tackfree for a minimum of one hour and no more than eight hours before the application of EP ENDURO-KOTE EKS Pedestrian Deck Coating.

5. Color/Finish Packaging:

Consult the Enduro Products Pedestrian Deck Coating Color Chart for available colors. EP ENDURO-KOTE EKS Pedestrian Deck Coating is available in a low sheen finish (sheen @ 85% = 4.0 - 4.4%). Anti-slip coating is a special order. Coating is available in onegallon and five-gallon containers.

6. Application:

Apply EP ENDURO-KOTE EKS Pedestrian Deck Coating in two (2) coats to achieve proper dry film thickness with a brush or roller. The coating should be applied at full package consistency. The first coat on concrete may be thinned up to 10% with water. Allow 2-4 hours between coats of EP ENDURO-KOTE EKS Pedestrian Deck Coating and 30 minutes to

touch. The coating will be fully cured in 24 hours for normal traffic and 72 hours for heavy traffic. Drying time depends on temperatures and humidity.

7. Coverage:

Coverage will vary depending on the condition of the surface and the texture desired to achieve proper dry film thickness. Average applications will yield the mil thickness as follows: EP ENDURO-KOTE EKS Pedestrian Deck Coating at 200 to 250 square feet per gallon to obtain 6 wet mils/2.6 dry mils; and EP ENDURO-KOTE EKS Pedestrian Deck Coating at 75 to 100 square feet per gallon with aggregate to obtain 12 wet mils.

8. Limitations:

Ambient and surface temperatures must be above 55°F and relative humidity below 80%. Do not apply EP ENDURO-KOTE EKS Pedestrian Deck Coating over any type of lightweight concrete without written approval by Enduro Products. Do not apply to surfaces with excessive moisture content or when there is a threat of rain.

9. Cleaning Instructions:

Clean up tools and equipment with soap and water after use.

Technical Data

10. Safety Health and Environmental Recommendations:

Provide proper ventilation. Avoid coating contact with skin and eyes. Use protective goggles and clothing. In case of eye contact, flood eyes with water and call a physician immediately. Wash hands thoroughly with soap and water after handling. Do not take internally. If ingested, call a physician immediately. Read the Material and Safety Data Sheet for EP ENDURO-KOTE EKS Pedestrian Deck Coating prior to handling or application as supplied by Enduro Products in California: (714) 526-5898, Fax (714) 526-6511; in Florida: (941) 378-9794, Fax (941) 378-9438; email: info@endurokote.com.

11. Warranty:

Enduro Products warrants its EP ENDURO-KOTE EKS Pedestrian Deck Coating to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Enduro Products makes no other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose with respect for Enduro Products. Enduro Products' sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of EP ENDURO-KOTE EKS Pedestrian Deck Coating proved to be defective and Enduro Products shall not be liable for any loss or damage.

<u>Fotal Pigment</u>	36.6%	
Titanium Dioxide	15.6%	
Extenders	21.0%	
Total Vehicle	63.4%	
Acrylic Resin	21.5%	
Additives	5.0%	
Water	36.9%	
Weights & Measurements	±3.0%	
Percent Solids By Weight	59.5%	
Percent Solids By Volume	47.1%	
Viscosity	98-102 KU	
Coating VOC	46 q/l	

SCAQMD - complies with SCAQMD Rule 1113 LEED - complies with Green Seal GS - 11 MPI - #60



Corporate Office: 1133 N. Patt Street, Anaheim, California 92801 • Phone: (714) 526-5898 • Fax: (714) 526-6511 Florida Office: 8050 N.W. 66th Street, Miami, Florida 33166 • (305) 591-8309 • Fax: (305) 591-8568 Toll Free: (877) 809-0781 • Email: info@endurokote.com • Website: www.endurokote.com

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Section 1: Identification of the Product/Company

Product Identifier:

Product Name: Enduro-Flexkote EFL Emulsion

Product Code:

Relevant identified uses of the substance or mixture Recommended use: For professional use in the construction industry Uses advised against:

None identified

Details of the supplier of the safety data sheet Manufacturer:

Enduro Products 1133 N. Pratt Street Anaheim, CA 92801 United States www.endurokote.com (714) 526-5898

Telephone (General)

Emergency telephone number			
Manufacturer:	(714) 526-5898 USA		

Section 2: Hazards Identification

Classification of the substance or mixture

GHS-US classification

No need for classification according to GHS criteria for this product

Label elements

GHS-US labeling

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards

No other information available

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Page 1 of 9



Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

Substances

Name	Product Identifier	% by weight	GHS-US classification
Acrylic copolymer	Trade secret	20-60	NA
dispersion			
Non hazardous			
components VOC= 0			
grams/ltr			

Amounts specified are typical and do not represent a specification. Any other ingredients are either proprietary, non-hazardous or present in amounts below the reportable limits.

Section 4: First aid measures

Description of necessary first aid measures

First-aid measures general:

Remove contaminated clothing

First-aid measures after inhalation:

If affected, remove to fresh air. Assist in breathing if necessary

First-aid measures after skin contact:

Immediately remove contaminated clothing and shoes. Launder clothing before reuse. Seek medical attention if symptoms of irritation or burns occur.

First-aid measures after eye contact:

Flush with copious amount of water for at least 15 minutes. If irritation develops, seek medical attention.

First-aid measures after ingestion:

Do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious or convulsing person. If person is conscious, rinse out the mouth with water and give plenty of water to drink. Get medical attention immediately.

Most important and effects, both acute and delayed

Page 2 of 9



Symptoms:

None expected due to the non-classification of the product.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Section 5: Firefighting measures **Extinguishing media** Suitable extinguishing media: Water spray, foam, dry powder Unsuitable extinguishing media: None known Special hazards arising from the substance or mixture Fire hazard: Poses no fire related hazard. No particular hazards known **Explosion hazard:** Non-explosive **Reactivity:** Will not facilitate or support combustion of other materials. Advice for firefighters **Firefighting instructions:** Not required **Protection during firefighting:** Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures General measures:

Wear protective equipment as described under Section 8 and follow the advice of safe handling and use given under Section 7. Emergency procedures are not required.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

Page **3** of **9**



High risk of slipping due to spillage/leakage of product

For emergency responders

- Protective equipment:
- Not Applicable

Emergency procedures:

Not Applicable

Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, etc.). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off products

Reference to other sections

See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for disposal information

Precautions for safe handling

Precautions for safe handling:

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation.

Hygiene measures:

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and house-keeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. In dusty environment, wear dust mask, protective goggles and gloves.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Store protected against freezing

Incompatible products:

See section 10

Incompatible materials:

See section 10

Storage area:

The product should be stored in a cool, dry and well-ventilated area, at ambient temperature directly out of the sunlight.

Page **4** of **9**



Section 8: Exposure controls/personal protection				
Control parameters				
Occupational exposure limits:				
No occupational exposure limits known				
Exposure controls				
Appropriate engineering controls:				
Er	nsure adequate ventilation			
Personal protective equipment:				
re	/ear protective goggles and gloves. Wear espiratory protection in a poor ventilated nvironment.			
Hand protection:				
	/ear chemically resistant protective gloves			
Eye protection:				
sh er	nemical goggles or safety glasses with side-shields nould be worn especially in a splashing nvironment. Use contact lenses solely is not ecommended.			
Respiratory protection:				
N In	Vear respiratory protection if ventilation is adequate.			
Thermal hazard protection:				
	ear suitable protection clothing			
Other information:	ands or face should be washed before breaks and at			
th	e end of and shift. Avoid contact with skin and eyes.			

Section 9: Physical and chemical properties

Information on basic physical and chemical propertiesLiquidPhysical state:LiquidAppearance:WateryColor:Milky V

Liquid Watery viscosity Milky White

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **5** of **9**



Odor:	
Odor threshold:	
pH:	
Relative evaporation rate (butyl acetate=:	1):
Melting point:	
Boiling point:	
Auto-ignition temperature:	
Decomposition temperature:	
Flammability (solid, gas):	
Vapor pressure:	
Flash Point:	
Flash Point Method:	
Relative vapor density @ 20 $^{\circ}$ C:	
Relative density:	
Density:	
Solubility:	
Log Pow:	
Log Kow:	
Viscosity, kinematic:	
Viscosity, dynamic:	
Explosive properties:	
Oxidizing properties:	
Explosive limits:	

Sweet Not available 7.5 – 9.0 <1 Slower Not available >212 ° F Not available Not Determined Not Applicable >18.62 mm Hg @ 20 ° C Not Applicable Not Applicable

1.05 Ibs / gal Completely miscible Not available Not available Not available Not available Non-explosive None known Not Applicable

Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

Corrosive effects to metal are not anticipated and not fire propagating <u>Chemical Stability</u> Product is stable under normal storage conditions <u>Conditions to Avoid</u> Avoid extreme heat and freezing conditions <u>Incompatible Materials</u> Oxidizing agents (i.e. perchlorates, nitrates etc.), and reactive metals (i.e. sodium, calcium, zinc etc.). Reaction with peroxides may result in violent decomposition with the possibility of

creating an explosion.

Hazardous Decomposition Products

Page **6** of **9**



(From burning, heating or reaction with other materials): Carbon Monoxide and Carbon Dioxide in a fire. Irritating and toxic fumes are produced at elevated temperatures. Aldehydes are also produced.

Section 11: Toxicological information

Information on toxicological effects TOXICITY MEASURES:

Primary routes of exposure:

Routes of entry are ingestion and inhalation, but may include eye or skin contact.

Acute toxicity:

Assessment of acute toxicity: Virtually non-toxic after a single ingestion. Virtually non-toxic after a single skin contact. Virtually non-toxic after inhalation. Ingestion may cause gastrointestinal disturbances.

Chronic toxicity:

No delayed chronic test data are known

Other information:

The product is considered to be harmless to health if used in the correct manner

Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

As far as present knowledge, the product is non-toxic

Persistence and degradability

The product can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge.

Bioaccumulation:

Accumulation in organisms is not to be expected

Mobility

No data available

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Page **7** of **9**



Waste treatment methods

Regional legislation (waste):

Dispose of waste and unused contents in accordance with national and local regulations.

Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate or uncertain.

Section 14: Transport information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID) and therefore no classification is required.

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

The following components of this product are subject to reporting requirements of sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

CHEMICAL	SECTION 302 EHS (TPQ)	SECTION 304 RQ	SECTION 313 TRI	
	(40 CFR 355, Appendix A)	(40 CFR Table 302.4)	(40 CFR 372.65)	

Not considered hazardous

A Section 311/312 (40 CFR 370) Hazard Categories:

ACUTE: No; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

This product is not listed under CERCLA

U.S. Clean Air Act Threshold Quantity (TQ):

This product is not listed.

U.S. Clean Water Act Requirements:

This product is not listed

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product contains crystalline silica, quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian WHMIS Classification:

Page **8** of **9**



Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

European Inventory of Existing Chemicals (EINECS):

All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes: Other information: Full text of H phrases:



NFPA health hazard: 1-May be irritating
 NFPA fire hazard: 1-Combustible if heated
 NFPA reactivity: 0-Normally stable, even under fire exposure conditions, and not reactive with water

Notice to Reader

The information provided herein is believed to be accurate at the time of preparation or prepared from sources deemed to be reliable, but it is the full responsibility of the user to investigate and comprehend other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Enduro Products **makes no warranty, expressed or implied, concerning the product or merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by Enduro Products, except that the product shall conform to Enduro Products' specification.**

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **9** of **9**



Section 1: Identification of the Product/Company

Product Identifier:

Product Name: ENDURO-FLEXKOTE EFC Cementitious Mix ------ EFC Gray or White

Product Code:

Relevant identified uses of the substance or mixture Recommended use: For professional use in the construction industry Uses advised against: None identified Details of the supplier of the safety data sheet Manufacturer:

Enduro Products 1133 N. Pratt Street Anaheim, CA 92801 United States <u>www.endurokote.com</u> (714) 526-5898

Telephone (General)

Emergency telephone number

Manufacturer: (714) 526-5898 USA

Section 2: Hazards Identification

Classification of the substance or mixture

GHS-US classification

Skin Corrosion/Irritation:	Category 2, H315
Eye Damage:	Category 1, H318
Skin Sensitization:	Category 1, H317
Carcinogenicity:	Category 1A, H350
Specific target organ systemic toxicity (single exposure):	Category 3, H335
Specific target organ systemic toxicity (repeated exposure): Category 1, H372

Revised: 08-17-2015 Supersedes: All previous versions Page **1** of **13**



Label elements

GHS-US labeling

The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard Pictograms (GHS-US)



Signal words (GHS-US):

Danger

Hazards statements (GHS-US):

H315 Causes skin irritation
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H335 May cause respiratory irritation
H350 May cause cancer
H372 Cause damage to organs through prolonged or repeated use

Precautionary statements (GHS-US) Prevention:

P102 Keep out of reach of childrenP280 Wear protective gloves, clothing, and eye/ face protectionP264 Wash skin after handlingP281 Wear protective clothing as needed

Response:

P305 + P351 + P338 + P310: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a Poison Center or doctor/physician.

Page **2** of **13**



	P302 + P352 + P333 + P313: Wash with plenty soap and water. If skin irritation or rash occurs: Get medical advice/attention P261 + P304 + P340 + P312: Avoid breathing dust/fumes, gas, mist, vapors, spray. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison
	center or doctor/physician
Storage:	
	P403+P233 store in a well-ventilated place. Keep container tightly closed
	P403 + P235 Store in a well-ventilated place. Keep cool
	P405 Store locked up
Disposal:	

P501 Dispose of contents and containers in accordance with local, regional and international regulations

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)-Annex III

Other hazards

No other information available

Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

Substances

Name	Product Identifier	% by weight	GHS-US classification
Ordinary Portland Cement	CAS # 65997-15-1	5-30	Skin irritant 2, H315
			STOT SE 3, H335
			Eye irritant, H318
			Skin sensitization 1, H317
Sand	CAS # 14808-60-7	55-85	STOT SE 3, H335

Revised: 08-17-2015 Supersedes: All previous versions Page **3** of **13**



	STOT RE 1, H372
	Carc. 1A, H350

Amounts specified are typical and do not represent a specification. Any other ingredients are either proprietary, non-hazardous or present in amounts below the reportable limits.

Section 4: First aid measures

Description of necessary first aid measures

First-aid measures general:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

First-aid measures after inhalation:

If affected, remove to fresh air. Dust in throat or nasal passage should clear spontaneously. Get medical attention if irritation persists or any discomfort, coughing or other symptoms continue or do not subside.

First-aid measures after skin contact:

Immediately remove contaminated clothing and shoes. Launder clothing before reuse. Seek medical attention if symptoms of irritation or burns occur.

First-aid measures after eye contact:

Do not rub eyes as additional corneal damage will continue to occur. Remove any contact lenses and open eyelids widely to flush immediately by thoroughly rinsing with plenty of clean water for at least 45 minutes to remove all particles. If possible use isotonic water (0.9% Sodium Chloride). Contact an eye specialist immediately.

First-aid measures after ingestion:

Do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious or convulsing person. If person is conscious, rinse out the mouth with water and give plenty of water to drink. Get medical attention immediately.

Most important and effects, both acute and delayed

Symptoms:

Irritation may occur. Pre-existing skin problems may be aggravated by prolonged or repeated contact.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Revised: 08-17-2015 Supersedes: All previous versions Page **4** of **13**



Section 5: Firefighting measures **Extinguishing media** Suitable extinguishing media: All type of extinguishing media are suitable Unsuitable extinguishing media: None known Special hazards arising from the substance or mixture Fire hazard: Poses no fire related hazard. Non-combustible material **Explosion hazard:** Non-explosive **Reactivity:** Will not facilitate or support combustion of other materials. **Advice for firefighters Firefighting instructions:** Not required **Protection during firefighting:** No need for specialist fire-fighting equipment. Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures:

Wear protective equipment as described under Section 8 and follow the advice of safe handling and use given under Section 7. Emergency procedures are not required.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

None required

For emergency responders

Protective equipment:

Not Applicable Emergency procedures:

Not Applicable

Page **5** of **13**



Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

For containment:

Recover spillage in a dry state if possible.

Methods for cleaning up:

Use dry cleanup methods that do not promote airborne dispersions e.g.

Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique).

• Wipe up the dust by mopping, wet brushing or water sprays or hoses (fine mist to avoid the dust becoming airborne) and remove slurry. If not possible, remove by slurrying with water (see Wet product).

When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear appropriate personal protective equipment and prevent dust from spreading.

Avoid inhalation of product and contact with skin. Place spilled materials into a container. Solidify before disposal as described under Heading 13.

Wet product: Clean up wet product and place in a container. Allow material to dry and solidify before disposal as described under Heading 13.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protective equipment

See Section 13 for disposal information

Section 7: Handling and storage

Do not handle or store near food and beverages or smoking material

Precautions for safe handling

Precautions for safe handling:

Do not ingest, avoid contact with skin and avoid contact with eyes. Avoid generating dust.

Hygiene measures:

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and house-keeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. In dusty environment, wear dust mask, protective goggles and gloves.

Conditions for safe storage, including any incompatibilities Storage conditions:

Page **6** of **13**



Bulk material should be stored in silos that are waterproof. Packed products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught, humid conditions and excesses of temperatures to avoid degradation of quality.

Incompatible products:

See section 10

Incompatible materials:

See section 10

Storage area:

The product should be stored in a cool, dry and well-ventilated area, at ambient temperature directly out of the sunlight.

Special rules on packaging:

Bags should be stacked in a stable manner. Do not use Aluminum containers due to incompatibility of the materials.

Specific end use(s)

			protection
5			

Control parameters

Occupational exposure limits:

Chemical Name	CAS #	EXPOSURE LIMITS
Ordinary Portland Cement	65997-15-1	OSHA PEL 5mg/m ³
		ACGIH TLV 1mg/m ³
Sand	14808-60-7	OSHA PEL .05 mg/m ³
		ACGIH TLV .025 mg/m ³

Exposure controls

Appropriate engineering controls:

Use only with adequate ventilation. If the operation generates dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure of airborne particulates below any recommended or statutory limits

Personal protective equipment:

Page **7** of **13**



Wear fire-proof clothing, protective goggles and gloves. Wear respiratory protection in a poor ventilated environment. Hand protection: Wear impervious, waterproof, abrasion and alkali resistant gloves. Do not rely on barrier cream versus abrasion resistant gloves. Do not allow product inside the gloves. Eye protection: Chemical goggles or safety glasses with side-shields should be worn especially in a dust environment. Use contact lenses solely is not recommended. Skin and body protection: Wear impervious, waterproof, abrasion and alkali resistant boots and protective long sleeved and long legged clothing to protect the skin from contact with this product. Remove any clothing that becomes saturated with this product and thoroughly wash the exposed areas immediately. **Respiratory protection:** If a risk assessment indicates the necessity for respiratory protection, use a properly fitted particulate filter respirator. Selection of respirator will be based upon the hazards of the product, the known or anticipated exposure levels and the assigned protection factor of the respirator. Thermal hazard protection: Wear suitable protection clothing Other information: Clean water should always be available for skin and emergency (eye) washing. Periodically wash any area contacted with the product using a pH neutral soap and uncontaminated water. When using, do not eat, drink or smoke

Section 9: Physical and chemical properties

Information on basic physical and chemical propertiesPhysical state:SoAppearance:Po

Solid Powdery material

Page **8** of **13**



Color:
Odor:
Odor threshold:
pH:
Relative evaporation rate (butyl acetate=1):
Melting point:
Boiling point:
Auto-ignition temperature:
Decomposition temperature:
Flammability (solid, gas):
Vapor pressure:
Flash Point:
Flash Point Method:
Relative vapor density @ 20 ° C:
Relative density:
Density:
Solubility:
Log Pow:
Log Kow:
Viscosity, kinematic:
Viscosity, dynamic:
Explosive properties:
Oxidizing properties:
Explosive limits:

Gray, White, Odorless Not available 12-13 Not Applicable Not available Not determined Not available Not Determined Not Applicable Not Determined Not Applicable Not Applicable 0.0 2.5 20.8 lbs / gal 0.1-1% Not available Not available Not available Not available Non-explosive None known Not Applicable

Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

No data available <u>Chemical Stability</u> Product is stable under normal storage conditions <u>Conditions to Avoid</u> Avoid humid conditions during storage as this might cause lumps and loss of product quality <u>Incompatible Materials</u> Avoid strong acids, bases and strong oxidizers and avoid the uncontrolled use of Aluminum powder in the wet product as Hydrogen will be produced.

Hazardous Decomposition Products

Page **9** of **13**



Product will not decompose into other hazardous by-products and will not polymerize

Section 11: Toxicological information

Information on toxicological effects

TOXICITY MEASURES:

Acute toxicity:

Based upon available data, the classification criteria are not met

Skin corrosion/irritation: (Category 2)

When in contact with wet skin may cause thickening, cracking or fissuring on the skin. Prolonged contact in addition with abrasion may cause severe burns.

Serious eye damage/irritation: (Category 1)

Direct contact may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by large amounts may cause effects ranging from moderate irritation to chemical burns and blindness.

Respiratory or skin sensitization: (Category 1)

Some individuals may develop eczema upon exposure by the high pH which induces irritant contact dermatitis after prolonged contact. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis. There is no indication of sensitization to the respiratory system.

Germ cell mutagenicity:

This product is not classified as a mutagen

Chronic Health Effects:

Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

Carcinogenicity:

The product contains an ingredient that may cause cancer.

Reproductive toxicity:

Developmental: Based on available data, the criteria are not met

Teratogenicity: Not hazardous by WHMIS/OSHA criteria

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria

Fertility: Based on available data, the criteria are not met

Specific target organ toxicity (single exposure):

May cause respiratory irritation

Specific target organ toxicity (repeated exposure):

Page **10** of **13**



May cause damage to organs through prolonged or repeated exposure **Aspiration hazard:** Based on available data, the criteria are not met **Other information:** Not available

Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

The product is not expected to be hazardous to the environment, but because of its high alkalinity the product may be toxic to aquatic life under certain conditions.

Persistence and degradability

Not relevant as the components are inorganic and after hardening presents no toxicity risks.

Mobility

Products is not volatile but may become airborne during handling operation.

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of waste and unused contents in accordance with national and local regulations.

Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate or uncertain.

Section 14: Transport information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID) and therefore no classification is required.

Section 15: Regulatory information

U.S. Federal Regulations

Page **11** of **13**



U.S. OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

The following components of this product are subject to reporting requirements of sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

1				
	CHEMICAL	SECTION 302 EHS (TPQ)	SECTION 304 RQ	SECTION 313 TRI
		(40 CFR 355 <i>,</i> Appendix A)	(40 CFR Table 302.4)	(40 CFR 372.65)
	Ordinary Portland	No	No	No
	Cement			
	Sand	No	No	No

A Section 311/312 (40 CFR 370) Hazard Categories:

ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

This product is not listed under CERCLA

U.S. Clean Air Act Threshold Quantity (TQ):

This product is not listed.

U.S. Clean Water Act Requirements:

This product is not listed

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product contains crystalline silica, quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian WHMIS Classification:

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

European Inventory of Existing Chemicals (EINECS):

All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes:

Other information:

Full text of H phrases:

STOT SE 3	Specific Target Organ Toxicity-Single Exposure, Category 3, Narcosis	
STOT RE 1	Specific Target Organ Toxicity-Repeated Exposure, Category 1	

Revised: 08-17-2015 Supersedes: All previous versions Page **12** of **13**







NFPA health hazard: 2-Moderately toxic or hazardous material which require additional PPE or equipment other than safety goggles and gloves.

NFPA fire hazard:0-Material is not combustibleNFPA reactivity:0-Normally stable, even under fire exposure conditions, and not reactive withwater

Notice to Reader

The information provided herein is believed to be accurate at the time of preparation or prepared from sources deemed to be reliable, but it is the full responsibility of the user to investigate and comprehend other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Enduro Products **makes no warranty, expressed or implied, concerning the product or merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by Enduro Products, except that the product shall conform to Enduro Products' specification.**

Revised: 08-17-2015 Supersedes: All previous versions Page **13** of **13**

Section 1: Identification of the Product/Company		
Product Identifier:		
	D-KOTE EKC Cementitious Mix EKC Gray or White D-DEK Colored Cementitious Mix Enduro-Dek	
Product Code:		
	of the substance or mixture	
Recommended use:		
For professional use in the c	onstruction industry	
Uses advised against:		
None identified		
Details of the supplier of the safety data sheet		
Manufacturer:		
	Enduro Products	
	1133 N. Pratt Street	
	Anaheim, CA 92801	
	United States	
Telephone (General)	<u>www.endurokote.com</u> (714) 526-5898	
(General)	(11) 520 5050	
Emergency telephone number		
Manufacturer:	(714) 526-5898 USA	

Section 2: Hazards Identification

Classification of the substance or mixture

GHS-US classification

Skin Corrosion/Irritation:	Category 2, H315
Eye Damage:	Category 1, H318
Skin Sensitization:	Category 1, H317
Carcinogenicity:	Category 1A, H350
Specific target organ systemic toxicity (single exposure):	Category 3, H335
Specific target organ systemic toxicity (repeated exposure)	: Category 1, H372

Label elements GHS-US labeling

Page **1** of **12**

The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard Pictograms (GHS-US)



	GHSUS	GHSOU	01300
Signal word	s (GHS-US):		Danger
Hazards stat	ements (GHS-	US):	H315 Causes skin irritation H317 May cause an allergic skin reaction H318 Causes serious eye damage H335 May cause respiratory irritation H350 May cause cancer H372 Cause damage to organs through prolonged or repeated use
Precautiona Prevention: Response:	ry statements	(GHS-US)	P102 Keep out of reach of children P280 Wear protective gloves, clothing, and eye/ face protection
			 P305 + P351 + P338 + P310: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a Poison Center or doctor/physician. P302 + P352 + P333 + P313: Wash with plenty soap and water. If skin irritation or rash occurs: Get medical advice/attention P261 + P304 + P340 + P312: Avoid breathing dust/fumes, gas, mist, vapors, spray. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician

Page **2** of **12**

P403+P233 store in a well-ventilated place. Keep container tightly closed P403 + P235 Sore in a well-ventilated place. Keep cool P405 Store locked up

Disposal:

P501 Dispose of contents and containers in accordance with local, regional and international regulations

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)-Annex III

Other hazards

No other information available

Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

Substances

Name	Product Identifier	% by weight	GHS-US classification
Ordinary Portland Cement	CAS # 65997-15-1	5-30	Skin irritant 2, H315
			STOT SE 3, H335
			Eye irritant, H318
			Skin sensitization 1, H317
Sand	CAS # 14808-60-7	55-85	STOT SE 3, H335
			STOT RE 1, H372
			Carc. 1A, H350

Amounts specified are typical and do not represent a specification. Any other ingredients are either proprietary, non-hazardous or present in amounts below the reportable limits.

Section 4: First aid measures

Description of necessary first aid measures First-aid measures general:

Page **3** of **12**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

First-aid measures after inhalation:

If affected, remove to fresh air. Dust in throat or nasal passage should clear spontaneously. Get medical attention if irritation persists or any discomfort, coughing or other symptoms continue or do not subside.

First-aid measures after skin contact:

Immediately remove contaminated clothing and shoes. Launder clothing before reuse. Seek medical attention if symptoms of irritation or burns occur.

First-aid measures after eye contact:

Do not rub eyes as additional corneal damage will continue to occur. Remove any contact lenses and open eyelids widely to flush immediately by thoroughly rinsing with plenty of clean water for at least 45 minutes to remove all particles. If possible use isotonic water (0.9% Sodium Chloride). Contact an eye specialist immediately.

First-aid measures after ingestion:

Do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious or convulsing person. If person is conscious, rinse out the mouth with water and give plenty of water to drink. Get medical attention immediately.

Most important and effects, both acute and delayed

Symptoms:

Irritation may occur. Pre-existing skin problems may be aggravated by prolonged or repeated contact.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media: All type of extinguishing media are suitable Unsuitable extinguishing media:

None known

Special hazards arising from the substance or mixture

Fire hazard:

Poses no fire related hazard. Non-combustible material

Explosion hazard:

Non-explosive

Reactivity:

Will not facilitate or support combustion of other materials.

Advice for firefighters

Firefighting instructions:

Not required

Protection during firefighting:

No need for specialist fire-fighting equipment.

Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures:

Wear protective equipment as described under Section 8 and follow the advice of safe handling and use given under Section 7. Emergency procedures are not required.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

None required

For emergency responders

Protective equipment:

Not Applicable

Emergency procedures:

Not Applicable

Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

For containment:

Recover spillage in a dry state if possible.

Methods for cleaning up:

Use dry cleanup methods that do not promote airborne dispersions e.g.

Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique).

• Wipe up the dust by mopping, wet brushing or water sprays or hoses (fine mist to avoid the dust becoming airborne) and remove slurry. If not possible, remove by slurrying with water (see Wet product).

When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear appropriate personal protective equipment and prevent dust from spreading.

Avoid inhalation of product and contact with skin. Place spilled materials into a container. Solidify before disposal as described under Heading 13.

Wet product: Clean up wet product and place in a container. Allow material to dry and solidify before disposal as described under Heading 13.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protective equipment

See Section 13 for disposal information

Section 7: Handling and storage

Do not handle or store near food and beverages or smoking material

Precautions for safe handling

Precautions for safe handling:

Do not ingest, avoid contact with skin and avoid contact with eyes. Avoid generating dust.

Hygiene measures:

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and house-keeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. In dusty environment, wear dust mask, protective goggles and gloves.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Bulk material should be stored in silos that are waterproof. Packed products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught, humid conditions and excesses of temperatures to avoid degradation of quality.

Incompatible products:

See section 10

Incompatible materials:

See section 10

Storage area:

The product should be stored in a cool, dry and well-ventilated area, at ambient temperature directly out of the sunlight.

Special rules on packaging:

Bags should be stacked in a stable manner. Do not use Aluminum containers due to incompatibility of the materials.

Specific end use(s)

Section 8: Exposure controls/personal protection

Page **6** of **12**

Control parameters Occupational exposure limits:

Chemical Name	CAS #	EXPOSURE LIMITS
Ordinary Portland Cement	65997-15-1	OSHA PEL 5mg/m ³
		ACGIH TLV 1mg/m ³
Sand	14808-60-7	OSHA PEL .05 mg/m ³
		ACGIH TLV .025 mg/m ³

Exposure controls

Appropriate engineering controls:

Appropriate engineering controls:	
	Use only with adequate ventilation. If the
	operation generates dust, use process enclosures,
	local exhaust ventilation or other engineering
	controls to keep worker exposure of airborne
	particulates below any recommended or statutory
	limits
Personal protective equipment:	
	Wear fire-proof clothing, protective goggles and
	gloves. Wear respiratory protection in a poor
	ventilated environment.
Hand protection:	
	Wear impervious, waterproof, abrasion and alkali
	resistant gloves. Do not rely on barrier cream
	versus abrasion resistant gloves. Do not allow
	product inside the gloves.
Eye protection:	
<i>,</i> .	Chemical goggles or safety glasses with side-shields
	should be worn especially in a dust environment.
	Use contact lenses solely is not recommended.
Skin and body protection:	
	Wear impervious, waterproof, abrasion and alkali
	resistant boots and protective long sleeved and
	long legged clothing to protect the skin from
	contact with this product. Remove any clothing
	that becomes saturated with this product and
	thoroughly wash the exposed areas immediately.
Respiratory protection:	

If a risk assessment indicates the necessity for respiratory protection, use a properly fitted particulate filter respirator. Selection of respirator will be based upon the hazards of the product, the known or anticipated exposure levels and the assigned protection factor of the respirator.

Thermal hazard protection:

Other information:

Wear suitable protection clothing

Clean water should always be available for skin and emergency (eye) washing. Periodically wash any area contacted with the product using a pH neutral soap and uncontaminated water. When using, do not eat, drink or smoke

Section 9: Physical and chemical properties

Information on basic phy	vsical and chemical prope	erties	
Physical state:		Solid	
Appearance:	Powdery material		
Color:	Gray, White, Mushroom, Saltillo, Sauterne, Parchment,		
	Cinnamon, Limestone, San	d Beige, Copper Beech and Slate Gray	
Odor:		Odorless	
Odor threshold:		Not available	
pH:		12-13	
Relative evaporation rate (bu	utyl acetate=1):	Not Applicable	
Melting point:		Not available	
Boiling point:		Not determined	
Auto-ignition temperature:		Not available	
Decomposition temperature	:	Not Determined	
Flammability (solid, gas):		Not Applicable	
Vapor pressure:		Not Determined	
Flash Point:		Not Applicable	
Flash Point Method:		Not Applicable	
Relative vapor density @ 20	° C:	0.0	
Relative density:		2.5	
Density:		20.8 lbs / gal	
Solubility:		0.1-1%	
Log Pow:		Not available	
Log Kow:		Not available	
Viscosity, kinematic:		Not available	
Viscosity, dynamic:		Not available	

Explosive properties: Oxidizing properties: Explosive limits: Non-explosive None known Not Applicable

Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

No data available

Chemical Stability

Product is stable under normal storage conditions

Conditions to Avoid

Avoid humid conditions during storage as this might cause lumps and loss of product quality

Incompatible Materials

Avoid strong acids, bases and strong oxidizers and avoid the uncontrolled use of Aluminum powder in the wet product as Hydrogen will be produced.

Hazardous Decomposition Products

Product will not decompose into other hazardous by-products and will not polymerize

Section 11: Toxicological information

Information on toxicological effects

TOXICITY MEASURES:

Acute toxicity:

Based upon available data, the classification criteria are not met

Skin corrosion/irritation: (Category 2)

When in contact with wet skin may cause thickening, cracking or fissuring on the skin. Prolonged contact in addition with abrasion may cause severe burns.

Serious eye damage/irritation: (Category 1)

Direct contact may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by large amounts may cause effects ranging from moderate irritation to chemical burns and blindness.

Respiratory or skin sensitization: (Category 1)

Some individuals may develop eczema upon exposure by the high pH which induces irritant contact dermatitis after prolonged contact. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis. There is no indication of sensitization to the respiratory system.

Germ cell mutagenicity:

This product is not classified as a mutagen

Chronic Health Effects:

Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

Carcinogenicity:

The product contains an ingredient that may cause cancer.

Reproductive toxicity:

Developmental: Based on available data, the criteria are not met Teratogenicity: Not hazardous by WHMIS/OSHA criteria Embryotoxicity: Not hazardous by WHMIS/OSHA criteria Fertility: Based on available data, the criteria are not met **Specific target organ toxicity (single exposure):** May cause respiratory irritation **Specific target organ toxicity (repeated exposure):** May cause damage to organs through prolonged or repeated exposure **Aspiration hazard:** Based on available data, the criteria are not met **Other information:** Not available

Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

The product is not expected to be hazardous to the environment, but because of its high alkalinity the product may be toxic to aquatic life under certain conditions.

Persistence and degradability

Not relevant as the components are inorganic and after hardening presents no toxicity risks.

Mobility

Products is not volatile but may become airborne during handling operation.

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of waste and unused contents in accordance with national and local regulations.

Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate or uncertain.

Section 14: Transport information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID) and therefore no classification is required.

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

The following components of this product are subject to reporting requirements of sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

CHEMICAL	SECTION 302 EHS (TPQ)	SECTION 304 RQ	SECTION 313 TRI
	(40 CFR 355, Appendix A)	(40 CFR Table 302.4)	(40 CFR 372.65)
Ordinary Portland	No	No	No
Cement			
Sand	No	No	No

A Section 311/312 (40 CFR 370) Hazard Categories:

ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

This product is not listed under CERCLA

U.S. Clean Air Act Threshold Quantity (TQ):

This product is not listed.

U.S. Clean Water Act Requirements:

This product is not listed

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product contains crystalline silica, quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian WHMIS Classification:

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

European Inventory of Existing Chemicals (EINECS):

All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes: Other information:

Full text of H phrases:

STOT SE 3	Specific Target Organ Toxicity-Single Exposure, Category 3, Narcosis
STOT RE 1	Specific Target Organ Toxicity-Repeated Exposure, Category 1



NFPA health hazard: 2-Moderately toxic or hazardous material which require additional PPE or equipment other than safety goggles and gloves.

NFPA fire hazard:0-Material is not combustibleNFPA reactivity:0-Normally stable, even under fire exposure conditions, and not reactive withwater-Normally stable, even under fire exposure conditions, and not reactive with

Notice to Reader

The information provided herein is believed to be accurate at the time of preparation or prepared from sources deemed to be reliable, but it is the full responsibility of the user to investigate and comprehend other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Enduro Products **makes no warranty, expressed or implied, concerning the product or merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by Enduro Products, except that the product shall conform to Enduro Products' specification.**



Section 1: Identification of the Product/Company

Product Identifier: Product Name: EKL Emulsion

Product Code:

Relevant identified uses of the substance or mixture Recommended use: For professional use in the construction industry Uses advised against: None identified Details of the supplier of the safety data sheet

Manufacturer:

Enduro Products 1133 N. Pratt Street Anaheim, CA 92801 United States www.endurokote.com (714) 526-5898

Telephone (General)

Emergency telephone nu	umber	
Manufacturer:	(714) 526-5898 USA	

Section 2: Hazards Identification

Classification of the substance or mixture

GHS-US classification

No need for classification according to GHS criteria for this product

Label elements

GHS-US labeling

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards

No other information available

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **1** of **9**



Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

Substances

Name	Product Identifier	% by weight	GHS-US classification
Acrylic resin	Trade secret	20-60	

Amounts specified are typical and do not represent a specification. Any other ingredients are either proprietary, non-hazardous or present in amounts below the reportable limits.

Section 4: First aid measures

Description of necessary first aid measures

First-aid measures general:

Remove contaminated clothing

First-aid measures after inhalation:

If affected, remove to fresh air. Assist in breathing if necessary

First-aid measures after skin contact:

Immediately remove contaminated clothing and shoes. Launder clothing before reuse. Seek medical attention if symptoms of irritation or burns occur.

First-aid measures after eye contact:

Flush with copious amount of water for at least 15 minutes. If irritation develops, seek medical attention.

First-aid measures after ingestion:

Do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious or convulsing person. If person is conscious, rinse out the mouth with water and give plenty of water to drink. Get medical attention immediately.

Most important and effects, both acute and delayed

Symptoms:

None expected due to the non-classification of the product.

Indication of any immediate medical attention and special treatment needed

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **2** of **9**



Treat symptomatically

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder Unsuitable extinguishing media: None known Special hazards arising from the substance or mixture Fire hazard: Poses no fire related hazard. No particular hazards known Explosion hazard: Non-explosive Reactivity: Will not facilitate or support combustion of other materials. Advice for firefighters Firefighting instructions: Not required Protection during firefighting: Eirefighters should be equipped with self-contained breathing apparatus a

Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Additional information

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures:

Wear protective equipment as described under Section 8 and follow the advice of safe handling and use given under Section 7. Emergency procedures are not required.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

High risk of slipping due to spillage/leakage of product

For emergency responders

Protective equipment:

Not Applicable

Page 3 of 9



Emergency procedures:

Not Applicable

Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, etc.). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off products

Reference to other sections

See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for disposal information

Precautions for safe handling

Precautions for safe handling:

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation.

Hygiene measures:

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and house-keeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. In dusty environment, wear dust mask, protective goggles and gloves.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Store protected against freezing Incompatible products: See section 10 Incompatible materials: See section 10 Storage area:

The product should be stored in a cool, dry and well-ventilated area, at ambient temperature directly out of the sunlight.

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **4** of **9**



Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits:

No occupational exposure limits known

Exposure controls

Appropriate engineering controls:	
	Ensure adequate ventilation
Personal protective equipment:	
	Wear fire-proof clothing, protective goggles and gloves. Wear respiratory protection in a poor
	ventilated environment.
Hand protection:	
	Wear chemically resistant protective gloves
Eye protection:	
	Chemical goggles or safety glasses with side-shields
	should be worn especially in a splashing
	environment. Use contact lenses solely is not
	recommended.
Respiratory protection:	
	Wear respiratory protection if ventilation is
	inadequate.
Thermal hazard protection:	
	Wear suitable protection clothing
Other information:	
	Hands or face should be washed before breaks and at
	the end of and shift. Avoid contact with skin and eyes.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	
Appearance:	
Color:	
Odor:	
Odor threshold:	
рН:	

Liquid Watery viscosity Milky White Sweet Not available 7.5 – 9.0

Page **5** of **9**



Relative evaporation rate (butyl acetate=1):
Melting point:
Boiling point:
Auto-ignition temperature:
Decomposition temperature:
Flammability (solid, gas):
Vapor pressure:
Flash Point:
Flash Point Method:
Relative vapor density @ 20 ° C:
Relative density:
Density:
Solubility:
Log Pow:
Log Kow:
Viscosity, kinematic:
Viscosity, dynamic:
Explosive properties:
Oxidizing properties:
Explosive limits:

<1 Slower Not available >212 ° F Not available Not Determined Not Applicable >18.62 mm Hg @ 20 ° C Not Applicable Not Applicable

1.05 lbs / gal

Completely miscible Not available Not available Not available Not available Not available Non-explosive None known Not Applicable

Other information:

No further relevant information available

Section 10: Stability and reactivity

Reactivity

Corrosive effects to metal are not anticipated and not fire propagating

Chemical Stability

Product is stable under normal storage conditions

Conditions to Avoid

Avoid extreme heat and freezing conditions

Incompatible Materials

Oxidizing agents (i.e. perchlorates, nitrates etc.), and reactive metals (i.e. sodium, calcium, zinc etc.). Reaction with peroxides may result in violent decomposition with the possibility of creating an explosion.

Hazardous Decomposition Products

(From burning, heating or reaction with other materials): Carbon Monoxide and Carbon Dioxide in a fire. Irritating and toxic fumes are produced at elevated temperatures. Aldehydes are also produced.

Page **6** of **9**



Section 11: Toxicological information

Information on toxicological effects

TOXICITY MEASURES:

Primary routes of exposure:

Routes of entry are ingestion and inhalation, but may include eye or skin contact.

Acute toxicity:

Assessment of acute toxicity: Virtually non-toxic after a single ingestion. Virtually non-toxic after a single skin contact. Virtually non-toxic after inhalation. Ingestion may cause gastrointestinal disturbances.

Chronic toxicity:

No delayed chronic test data are known

Other information:

The product is considered to be harmless to health if used in the correct manner

Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

Toxicity

As far as present knowledge, the product is non-toxic

Persistence and degradability

The product can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge.

Bioaccumulation:

Accumulation in organisms is not to be expected

Mobility

No data available

Other adverse effects

Not determined for this product

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of waste and unused contents in accordance with national and local regulations.

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **7** of **9**



Waste disposal recommendations:

Ensure the use of properly authorized waste management companies where appropriate or uncertain.

Section 14: Transport information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID) and therefore no classification is required.

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations

U.S SARA Reporting Requirements:

The following components of this product are subject to reporting requirements of sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

CHEMICAL	SECTION 302 EHS (TPQ)	SECTION 304 RQ	SECTION 313 TRI
	(40 CFR 355, Appendix A)	(40 CFR Table 302.4)	(40 CFR 372.65)

Not considered hazardous

A Section 311/312 (40 CFR 370) Hazard Categories:

ACUTE: No; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

U.S. CERCLA Reportable Quantity (RQ):

This product is not listed under CERCLA

U.S. Clean Air Act Threshold Quantity (TQ):

This product is not listed.

U.S. Clean Water Act Requirements:

This product is not listed

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product contains crystalline silica, quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian WHMIS Classification:

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

European Inventory of Existing Chemicals (EINECS):

Page **8** of **9**



All of the components of this product are included on EINECS.

Section 16: Other information

Indication of changes: Other information: Full text of H phrases:



NFPA health hazard:1-May be irritatingNFPA fire hazard:1-Combustible if heatedNFPA reactivity:0-Normally stable, even under fire exposure conditions, and not reactive withwater

Notice to Reader

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Revised: 08-30-2015 Supersedes: 10-14-2010 Page **9** of **9**



Section 1: Identification of the Product/Company

Product Identifier: Product Name: EKS Sealer

Product Code:

Relevant identified uses of the substance or mixture Recommended use: For professional use in the construction industry Uses advised against: None identified Details of the supplier of the safety data sheet

Details of the supplier of the safety data sheet Manufacturer:

> Enduro Products 1133 N. Pratt Street Anaheim, CA 92801 United States www.endurokote.com (714) 526-5898

Telephone (General)

Emergency telephone numberManufacturer:(714) 526-5898USA

Section 2: Hazards Identification

Routes of Exposure Inhalation of vapor or mist Eye or Skin contact with product vapor or mist

Effects of overexposure

Eyes Irritation **Skin** Prolonged or repeated exposure may cause irritation **Inhalation** Irritation of upper respiratory tract

Revised: 08-30-2015 Supersedes: 10-14-2010 Page 1 of 8



Signs or symptoms of overexposure: Redness and itching or burning sensation may indicate eye or excessive skin exposure

Medial conditions aggravated by exposure: None generally recognized.

Section 3: Composition/information on ingredients

Reportable Components

Na	me	CAS Number	Wt %	
Calcium (Carbonate	1317-65-3	6.32	
Titaniun	n Dioxide	13463-67-7	<27	

Section 4: First aid measures

Description of necessary first aid measures

First-aid measures general:

Remove contaminated clothing

First-aid measures after inhalation:

If affected, remove to fresh air. Assist in breathing if necessary

First-aid measures after skin contact:

Immediately remove contaminated clothing and shoes. Launder clothing before reuse. Seek medical attention if symptoms of irritation or burns occur.

First-aid measures after eye contact:

Flush with copious amount of water for at least 15 minutes. If irritation develops, seek medical attention.

First-aid measures after ingestion:

Do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious or convulsing person. If person is conscious, rinse out the mouth with water and give plenty of water to drink. Get medical attention immediately.

Most important and effects, both acute and delayed

Symptoms:

None expected due to the non-classification of the product.

Page **2** of **8**



Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Water spray, foam, dry powder

Unsuitable extinguishing media:

None known

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

Closed containers may explode (due to build-up of pressure) when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause health hazard. Symptoms may not be immediately apparent. Obtain medical attention immediately.

Advice for firefighters

Firefighting instructions:

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used fog nozzles are preferred. Water may be used to cool closed containers to prevent pressure build up and possible auto-ignition or explosion when exposed to extreme heat.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures General measures:

Wear protective equipment as described under Section 8 and follow the advice of safe handling and use given under Section 7. Emergency procedures are not required.

For non-emergency personnel

Protective equipment:

Wear chemical resistance (impervious) gloves

Emergency procedures:

High risk of slipping due to spillage/leakage of product

For emergency responders

Protective equipment:

Not Applicable

Page 3 of 8



Emergency procedures:

Not Applicable

Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, etc.). Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off products

Reference to other sections

See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for disposal in

Precautions for safe handling

Precautions for safe handling:

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation.

Hygiene measures:

General occupational hygiene measures are required to ensure safe handling of the product. These measures involve good personal and house-keeping practices. Wash hands after use if contaminated. Avoid wearing contaminated clothing. In dusty environment, wear dust mask, protective goggles and gloves.

Conditions for safe storage, including any incompatibilities

Storage conditions:

Store protected against freezing Incompatible products: See section 10 Incompatible materials: See section 10 Storage area:

Storage area:

The product should be stored in a cool, dry and well-ventilated area, at ambient temperature directly out of the sunlight.

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **4** of **8**



Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits:

No occupational exposure limits known

Exposure controls

Appropriate engineering controls:	
	Ensure adequate ventilation
Personal protective equipment:	
	Wear fire-proof clothing, protective goggles and gloves. Wear respiratory protection in a poor ventilated environment.
Hand protection:	
	Wear chemically resistant protective gloves
Eye protection:	
	Chemical goggles or safety glasses with side-shields should be worn especially in a splashing environment. Use contact lenses solely is not recommended.
Respiratory protection:	
	Wear respiratory protection if ventilation is inadequate.
Thermal hazard protection:	
	Wear suitable protection clothing
Other information:	
	Hands or face should be washed before breaks and at
	the end of and shift. Avoid contact with skin and eyes.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:
Appearance:
Color:
Odor:
Odor threshold:
рН:

Liquid Watery viscosity Milky White Sweet Not available 7.5 – 9.0

Page **5** of **8**



Relative evaporation rate (butyl acetate=1): Melting point: Boiling point: Auto-ignition temperature: Decomposition temperature: Flammability (solid, gas): Vapor pressure: Coating V.O.C 46.63 Grams/ltr Specific Gravity Vapor Density: Solubility in Water Evaporation Rate: Appearance and Odor <1 Slower Not available >212-350 Not available Not Determined Not Applicable >18.62 mm Hg @ 20 ° C

(H2O=1.00):1.36 Greater than air Soluble Slower than Ether Liquid, mild odor

Section 10: Stability and reactivity

<u>Stability: Stable</u> <u>Conditions to Avoid: None Known</u> <u>Incompatibility: None Known</u> <u>Hazardous decomposition Products: By fire: carbon dioxide, carbon monoxide</u> <u>Hazardous Polymerization-will not occur</u>

Section 11: Toxicological information

No Data Available

Section 12: Ecological information

All work practices must be aimed at eliminating environmental contamination.

No Data Available

Section 13: Disposal considerations

Waste treatment methods

Regional legislation (waste):

Dispose of waste and unused contents in accordance with national and local regulations. Waste disposal recommendations:

Revised: 08-30-2015 Supersedes: 10-14-2010 Page 6 of 8



Ensure the use of properly authorized waste management companies where appropriate or uncertain.

Section 14: Transport information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID) and therefore no classification is required.

Section 15: Regulatory information

U.S. Federal Regulations

U.S. OSHA Regulatory Status:

This material is not considred under OSHA regulations

U.S SARA Reporting Requirements:

The following components of this product are subject to reporting requirements of sections 311. 312 of Title III of the Superfund Amendments and Reauthorization Act.

Not considered hazardous

A Section 311/312 (40 CFR 370) Hazard Categories:

ACUTE: No; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

SARA 313: See Section 3

Toxic Substances Control Act (TSCA):

All components of this product are included on the TSCA inventory

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

This product contains trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16: Other information

Indication of changes: Other information: Full text of H phrases:

Revised: 08-30-2015 Supersedes: 10-14-2010 Page **7** of **8**





NFPA health hazard: 1-May be irritating
 NFPA fire hazard: 1-Combustible if heated
 NFPA reactivity: 0-Normally stable, even under fire exposure conditions, and not reactive with water

Notice to Reader

The information provided herein is believed to be accurate at the time of preparation or prepared from sources deemed to be reliable, but it is the full responsibility of the user to investigate and comprehend other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Enduro Products **makes no warranty, expressed or implied, concerning the product or merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by Enduro Products, except that the product shall conform to Enduro Products' specification.**

Page **8** of **8**

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