DAUERCAST DQ

Seamless, broadcast applied, multi-colored decorative quartz aggregate floor system combines aeshetic appeal with excellent chemical and wear resistance.

VOLATILE ORGANIC COMPOUND (VOC) REGULATORY COMPLIANCE

	USEPA	CARB-SCM	SCAQMD	LADCO, OTC	UT-R307, CO	MCAQD	CT, MD, DE, D.C.	CANADA
BINDER COAT	■	■	■	■	■	■	■	■
TRANSPARENT TOPCOAT	■	■	■	■	■	■	■	■

HOW IT WORKS

- DAUERCAST DQ floor system is a thin section broadcast applied floor topping designed to provide a seamless floor and integral cove base which provides excellent chemical and abraision resistance while providing architectural appeal. DAUERCAST DQ systems may be designed to provide water tight installations and/or slip resistance for surfaces subject to periodic wetting or spillage.
- The broadcast finished floor is between 1/16" - 1/8" (1.6 - 3.2 mm) thick and consists of a transparent water based epoxy resin primer (PRIME 40E), a transparent epoxy base coat (DAUERCAST BASE) with embedded decorative quartz aggregate and a transparent light stable epoxy polymer seal coat (DAUERCAST TOP).
- DAUERCAST DQ floor systems are available in a variety of wearing surfaces from fine to aggressive textures. Decorative quartz aggregates are available in 8 basic colors and a wide variety of custom color combinations.

APPLICATIONS

- For laboratories, restrooms, kitchens, food processing areas, institutional floors, swimming pool perimeters, kennels, etc.
- For use where coating installation environment prohibits use of systems with significant solvent content irrespective of VOC compliance.
- For use where coating performance objectives require the strength, adhesion, and chemical resistance of epoxy resins plus the abrasion/wear resistance of quartz.
- For use where coating aggregate loading objectives require use of particulate sizes (in excess of 8 mils or 203 microns) for wear or anti-skid purposes.
- For use where high solids, non-shrinking coating/topping compounds with minimal solvent odor are required for resurfacing rough or worn floors and prompt resumption of use is required.
- For use in providing new smooth wearing surfaces in thin sections to minimize additional supported weight and/or elevation changes.
- For use in environments requiring USDA and/or FDA approval, (requires use of DQ USDA Top) such as food handling facilities in hospitals, supermarkets, restaurants, and food processing and packaging operations.
- For use in overlaying minor surface imperfections (i.e., minor scaling, minor crazing/shrinkage cracks, etc.).

ADVANTAGES

- The proprietary chemical cure method DAUERCAST DQ employs minimizes resin environmental sensitivity during application. This feature translates into excellent product storage stability, easy mixing and application without concern as to incorporation of moisture laden air and resulting CO_2 gassing (bubbling) of the coating - the byproduct of moisture sensitve polyurethanes and humidity.
- DAUERCAST DQ's essential solvent free composition elimiates "solvent substrate strike" and film bubbling caused by subsequent solvent escape.
- These same features permit DAUERCAST DQ applications in high build films without concern as to cure and/or film gassing. DAUERCAST DQ cures from the inside out. DAUERCAST DQ films durability results in easy and minimal maintenance.
- DAUERCAST DQ's proprietary chemistry reduces the chalking tendency characteristic of epoxy systems on exterior exposures.

PRECAUTIONS

- For industrial use only.
- Do not use where moisture can contact the underside of the cured coating.
- Do not use on concrete cured with liquid membran curing or sealing compounds unless such are completely removed by mechanical or chemical means prior to DAUERCAST DQ application.
- Where substrate cracks are present, DAUERCAST DQ floor may reflect such cracks. Refer to application procedures and recommendations regarding crack detailing.
- MAKE TEST APPLICATION UNDER ANTICIPATED USE CONDITIONS TO VERIFY DESIRED APPEARANCE AND PERFORMANCE.

COMPONENT PACKAGING

- Colored Quartz Aggregate (DAUERCAST DQ Aggregate) is packaged in 50 lb. (22.7 kg) bags and is available in nine standard colors and three textures (fine,

medium, coarse) to allow different degrees of finish floor surface texture. Custom colors are available.

INSTALLATION

REQUEST CURRENT (VERIFY) PRODUCT LITERATURE, LABELS, AND MATERIAL SAFETY DATA SHEETS FROM MANUFACTURER IN WRITING AND READ SUCH THOROUGHLY BEFORE ATTEMPTING PRODUCT USE.

IMPORTANT

Site environmental and substrate conditions and construction have a major effect on product selection, application methods, procetures and rates, appearance, and performance. While product literature provides general information applicable to some conditions, an adequate site test application by the purchaser or installer in advance of field scale use is mandatory (irrespective of any other verbal or written representations) to verify product and quantities purchased can be satisfactorily applied and will achieve desired appearance and performance under intended use conditions.

SURFACE PREPARATION

Concrete surfaces to be treated must be dry, a minimum of 30 days old, free from surface accumulation of dust, dirt, oil, debris, concrete cures, bondbreakers, rubber tire residue, paints, drywall compounds, and other compounds which would prevent penetration and intimate contact between the concrete and the DAUERCAST SQ flooring system.

All substrate surfaces require some preparation prior to coating. New, clean concrete surfaces should be acid etched to provide a surface texture equivalent to that of 100 grit sandpaper prior to priming and coating installation.

Old floors should be mechanically cleaned (sandblasted, abrasive shot blasted, water blasted (8000 psi/56 MPA minimum), scarified or other) to remove surface contaminants. Excessively oily or greasy floors may require spot treatment with a suitable concrete cleaner or general caustic wash prior to chemical or mechanical cleaning.

All chemically or mechanically cleaned floors MUST be acid etched prior to priming.

VERIFY ADEQUACY OF SURFACE PREPARATION BY PRIMING AND TOP COATING TEST AREAS AND THEN VERIFYING SATISFACTORY ADHESION.

CRACK DETAILING (STATIC)

Non-moving cracks less than 1/32" (0.8 mm):

Apply DAUERCAST COVE BASE in a 1"- 2" (2.5 - 5.0 cm) wide band over crack, flush with joint top. After curing, sand as needed and apply the DAUERCAST SQ system directly over DAUERCAST COVE BASE.

Cracks greater than 1/32" (0.8 mm):

Dry saw or rout cracked joint to 1/4" by 1/2" dimensions. Clean and install NOX-CRETE DYNAFLEX 502 sealant to surface flush condition. Sand DYNAFLEX 502 as needed prior to topping.

CRACK DETAILING (DYNAMIC)

Structural, moving cracks, control joints and other cracks over 1/32" (0.8mm) wide should be dry sawed or routed to 1/2" to 1/2" by 1.25cm) dimensions. Clean, then apply bondbreaker tape to bottom of joint or install backer rods to limit sealant depth to maximum of 1/2", prime, and install a flexible joint sealant to surface flush condition or triangular cover configuration at vertical intersections. Following sealant cure, carefully stripe sealed joint with a 1" (2.5 cm) wide application of bondbreaker tape or chemical bondbreaker centered over joint and apply 6" (15 cm) wide 28 WRM (711 microns) thick detail coat of DEKFLEXT D membrane centered over joint and extending equally only each side of joint or slab/wall surface without primer application.

NOTE: Excessive detail material may show through DAUERCAST DQ finished surface and excessive joint movement may result in reflective cracking through the DAUERCAST DQ floor system.

All expansion joints should be carried through DAUERCAST DQ system and sealed with a flexible joint sealant.

DAUERCAST DQ SYSTEM TERMINATION

Terminal DAUERCAST DQ System at expansion or isolation joints. For termination at uncoated surface junctures, install a saw cut along juncture and chip back to key DAUERCAST DQ system and permit tapering of system to uncoated slab elevation.

WATERPROOFING SYSTEM

When total system must be waterproof, the application of NOX-CRETE DEKFLEX D membrane is required prior to installing DAUERCAST DQ System. Contact Nox-Crete for more information.

VERTICAL INSTALLATIONS

READ ALL PRODUCT LITERATURE, LABELS AND MATERIAL SAFETY DATA SHEETS BEFORE PROCEEDING. Use NOX-CRETE's DAUERGROUT E or a suitable pre-molded material to obtain desired cove radius at all slab/wall junctures. If a cove bead is to be used, install prior to application of cove primer.

PRIME 40E APPLICATION

Prime with PRIME 40E at a rate of 200-300 SF/gal. (5.0-7.5 SM/L). Allow primer to reach hard, tack free state and promptly (within window) proceed with SQ COVE Base installation.

Typical recoatability window: 24 hrs @ 70°F (20°C).

DAUERCAST DQ COVE BASE APPLICATION

Verify primer cure is within the specified window and has not been contaminated with dirt, moisture, or debris. Verify deck temperatures are a minimum of 60°F (16°C) and will not drop below that temperature during entire cove installation. Mix DAUERCAST DQ COVE Base components A and B adequately and quickly proceed with the installation.

Promptly spread material by brush or roller to achieve an 11 WFM (279 microns) or 150 SF/gal. (3.75 SM/L) application of DQ COVE Base.

DAUERCAST DQ AGGREGATE APPLICATION

Verify decorative quartz aggregate is properly mixed (blended). Uniformly and evenly broadcast the decorative quartz promptly and directly into the wet DAUERCAST DQ COVE Base coating. Apply aggregate uniformly to avoid streaking, ridges, or segregation. Apply aggregate to point of complete coverage (typically 40 lbs./100 SF (19.4 kg/10 SM).

DAUERCAST DQ COVE TOP APPLICATION

Install DAUERCAST DQ COVE Top coating at the same time the horizontal DAUERCAST DQ Top coating is installed.

Following complete removal of excess decorative quartz

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aggregate, verify broadcast surface is clean and dry. Using a brush or medium nap roller, apply the necessary quantity of DAUERCAST DQ COVE Top coating. (**NOTE**: application rates vary depending on desired finished cove texture, grade and application of colored quartz aggregate. Typical application range is 50-150 SF/gal. (1.25-3.75 SM/L).

HORIZONTAL INSTALLATIONS

READ ALL PRODUCT LITERATURE, LABELS AND MATERIAL SAFETY DATA SHEETS BEFORE PROCEEDING.

NOTE: All cove materials with the exception of the DAUERCAST DQ Top coat should be installed prior to the installation of the floor primer and subsequent floor materials. All floor surfaces should be smooth and level. Where surface spalls or irregularities exist, apply NOX-CRETE DAUERGROUT E or STALDEC SLF to fill voids and smooth surface elevation.

PRIME 40E APPLICATION

Apply PRIME 40E to smooth, crack detailed, etched, clean, dry substrate. Suitable application rate for adequately sealing the substrate should result in approximately 2 DFM (50 Micron) surface accumulation. Typical rate for concrete surfaces is 200-300 SF/gal. (5.0-7.5 SM/L). Allow primer to reach hard, tack free state and promptly (within window) proceed with DAUERCAST DQ base coat installation. Typical Recoatability Window: 24 hrs @ 70°F (20°C).

DAUERCAST DQ BASE APPLICATION

Verify primer cure is within the specified window and has not been contaminated with dirt, moisture, or debris. Verify slab temperature is a minimum of 60°F (16°C) and will not drop below that temperature during entire system installation. Mix DAUERCAST DQ base components A and B adequately and immediately pour product into thin films to avoid viscosity increase and gelation solidification.

Promptly spread material by squeegee to achieve a 11 WFM (379 Micron) or 150 SF/gal. (3.75 SM/L) application of DAUERCAST DQ base coating. Back roll as necessary with a medium nap roller to eliminate squeegee marks and overlap to ensure uniform application. Material may be laid down with an airless sprayer but should be leveled to even uniform depth by following sprayer with medium nap roller.

DECORATIVE QUARTZ AGGREGATE APPLICATION

Verify decorative quatz aggregate is properly mixed (blended.) Uniformly and evenly broadcast the decorative quartz promptly and directly into the wet DAUERCAST DQ base coating. Apply aggregate uniformly to avoid streaking, ridges, or segregation. Apply aggregate to point of complete coverage and slight excess (typically 40 lbs. / 100 SF (19.4 kg/10 SM).

DAUERCAST DQ TOP APPLICATION

Following a minimum of 12 hours cure on the broadcast base coat, remove excess, unbonded decorative quartz aggregate with compressed air, vacuum, or broom. Avoid excessive air pressure or sweeping action that would dislodge partially bonded aggregate.

Repeat DAUERCAST DQ Base and quartz aggregate application as many times as needed to achieve desired system thickness.

Following complete removal of excess quartz aggregate, verify broadcast surface is clean and dry. Using airless sprayer and medium nap roller or squeegee and medium nap roller, apply the necessary quantity of DAUERCAST DQ TOP coating. (Note: Application rates vary depending on desired finished floor texture, grade and application of decorative quartz aggregate. Typical application range is 50-150 SF/gal. (1.25-3.75 SM/L).

NOTE: Apply DAUERCAST DQ COVE Top coating on all coves at the same time the floor receives the DAUERCAST DQ Top coating.

Avoid foot traffic on treated areas for minimum of 24 hours and heavy traffic for a minimum of 48 hours. (Cure times will be longer with cool substrate temperatures - verify adequacy of cure before use resumption).

Discard unused material from the sprayer or roller pan immediately following application. Clean application equipment immediately with NOX-CRETE Solvent C or xylene. Discard used rollers, brushes, etc. as they cannot be cleaned satisfactorily. If a sprayer is used, be certain to clean sprayer completely after use and before sprayer is be to shut down for more than 10 minutes.

TECHNICAL DATA

PRIMER (PRIME 40E)

Bulk Density Component A & B ..... 8.83 lbs./gal. (1060 g/l)
Total mixed kit volume ..... 3.0 gal. (11.3 L)
Nonvolatiles 100%
VOC, ASTM D2369 ..... < 145 g/l
VP ..... < 9 mmHg @ 20ϒ X

BASE COAT (DAUERCAST DQ Base)

Bulk Density
Component A ..... 9.3 lbs./gal. (1116 g/l)
Component B ..... 7.5 lbs./gal. (900 g/l)
Total mixed kit volume of A & B ..... 4.5 gal. (17.1 L)
Nonvolatiles 100%
VOC, ASTM D2369 ..... < 50 g/l
VP ..... < 1 mmHg @ 20ϒ X

TOP COAT (DAUERCAST DQ Top)

Bulk Density
Component A ..... 9.4 lbs./gal. (1128 g/l)
Component B ..... 8.7 lbs./gal. (1044 g/l)
Total mixed volume of A & B ..... 4 gal. (15.1 L)
Nonvolatiles 100%
VOC, ASTM D2369 ..... < 50 g/l
VP ..... < 1 mmHg @ 20ϒ X

COVE BASE COAT (DAUERCAST DQ COVE Base)

Bulk Density
Component A ..... 13.1 lbs./gal. (1572 g/l)
Component B ..... 10.8 lbs./gal. (1296 g/l)
Total mixed kit volume of A & B ..... 1.8 gal. (6.8 L)
Nonvolatiles 100%
VOC, ASTM D2369 ..... < 50 g/l
VP ..... < 1 mmHg @ 20ϒX

COVE TOP COAT (DAUERCAST DQ COVE Top)

Bulk Density
Component A ..... 9.4 lbs./gal. (1128 g/l)
Component B ..... 8.8 lbs./gal. (1056 g/l)
Total mixed volume of A & B ..... 1.8 gal. (6.8 L)
Nonvolatiles 100%
VOC, ASTM D2369 ..... < 50 g/l
VP ..... < 1 mmHg @ 20ϒX

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TECHNICAL DATA COMPLETE SYSTEM

Tensile Strength ..... 3500 psi
Compressive Strength, ASTM C-579 . 10,000 psi (70 MPA)
Surface Hardness, ASTM D-2240 Shore D 85
Indentation characteristics .....0.011" (0.25 mm) indent
MIL-D-3134 Para 4.7.3, 2 lb steel ball drop
Adhesion, ACI Committee 403 .....365 psi (2600 KPA)
Bulletin Title No. 59-43, 100% failure in concrete
Water Absorption, MIL-D-3134 .....< 1%
Taber Abrasion 1,000g load ..... 49.5 TWI
CS17 wheel 1,000g cycle
Slip resistance varies depending on surface texture selected.

CHEMICAL RESISTANCE

DAUERCAST DQ flooring provides minimum one hour spot reistance to the following chemical substances, with little, if any, coating effect.

1N Hydrochloric Acid	Brake Fluid	Isopropanol
1N Lactic Acid	Butyl Alcohol	Jet Fuel A
1N Sodium Hydroxide	Dairy Whey	Petroleum Oil
Antifreeze	Deicing Salts	Toluene
Aromatic Solvent Blends	Diesel Fuel	Urine
Avgas	Fatty Acids	Vegetable Oil
	Fruit Juice	Water
	Gasoline	Xylene
	Hydraulic Oil	

PACKAGING

COMPONENT	CONTENT	GROSS WEIGHT
PRIME 40E	3.0 gal. (11.35 L)	31 lbs. (14.06 kg)
Binder Coat	4.5 gal. (17.03 L)	46 lbs. (20.87 kg)
Cove Binder Coat	.75 gal. (2.84 L)	18 lbs. (8.16 kg)
Top Coat	4.5 gal. (17.03 L)	50 lbs. (22.68 kg)
Aggregate	50 lbs. (22.68 kg)	50 lbs. (22.68 kg)

POT LIFE

Typically 20 to 30 minutes following mixing at 70° F (20° C) temperatures

SHELF LIFE

One year in original factory sealed containers. Use before expiration date stenciled on containers.

HANDLING/STORAGE

Store in clean dry place at room temperatures. Component B may partially crystallize during extended storage at cold temperatures. Contact NOX-CRETE INC. for instructions in writing if crystallization is apparent. Do not expose PRIME 40E to freezing temperatures which will destroy product.

AVAILABILITY AND TECHNICAL SERVICES

In addition to corporate offices in Omaha, Nebraska, NOX-CRETE INC. maintains regional offices and distribution centers in principal markets throughout the world. For source or technical information, phone (800) 669-2738 or (402) 341-2080.

LIMITED WARRANTY

NOTICE-READ CAREFULLY

CONDITIONS OF SALE

NOX-CRETE, INC. (NOX-CRETE) offers this product for sale subject to, and Buyer and all users are deemed to have accepted, the following conditions of sale and limited warranty which may only be varied by written agreement of a duly authorized corporate officer of NOX-CRETE. No other representative of or for NOX-CRETE is authorized to grant any warranty or to waive limitation of liability set forth below.

WARRANTY LIMITATION

NOX-CRETE warrants this product to be free of manufacturing defects. If the product when purchased was defective and was within use period indicated on container or carton, when used, NOX-CRETE will replace the defective product with new product without charge to the purchaser.

NOX-CRETE makes NO OTHER WARRANTY, either express or implied, concerning this product. There is NO WARRANTY OF MERCHANTABILITY. In no case shall NOX-CRETE be liable for special, indirect or consequential damages resulting from the use or handling of the product, and no claim of any kind shall be greater in amount than the purchase price of the product in respect of which damages are claimed.

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NOX-CRETE MAKES NO WARRANTY TO THE PERFORMANCE OF THE PRODUCT AFTER IT IS APPLIED BY THE PURCHASER, AND PURCHASER ASSUMES ALL RISKS ASSOCIATED WITH THE USE OR APPLICATION OF THE PRODUCT.

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