DURO-COLOR DYE CONCENTRATE

Deep penetrating, translucent, concentrated dye for diamond polished concrete floors and is a component of the **Duro-Floor Color System**.

HOW IT WORKS

Duro-Color dye concentrate is an integral component part of the **Duro-Floor Color System** designed specifically for use on diamond polished concrete floors. Duro-Color contains ultrafine nanoparticles of dye that, combined with a very polar solvent system and special surfactants, penetrate deep into diamond prepared concrete floor surfaces. Duro-Color is packaged in a concentrated form that can be diluted with either Duro-Nox LSC liquid floor hardener, water or any VOC exempt solvent depending upon the specific project requirements. When combined with the **Duro-Floor Color System**, Duro-Color dye concentrate provides a deep, rich color that transforms standard gray color concrete into a unique, beautiful, sustainable, high gloss, stain protected floor surface that will provide many years of service requiring only minimal maintenance.

APPLICATIONS

- For staining all new interior, existing or overlaid concrete floors to be diamond polished using planetary grinding and polishing equipment.
- Ideal for use in new and existing retail store applications requiring a decorative, low maintenance finished flooring system.
- Also performs well in new and existing office applications as a replacement for tile or carpeting.
- Ideal for use in sporting arenas, convention centers, schools, institutional buildings, libraries, public buildings, grocery stores, clothing stores, electronic stores, restaurants, office buildings and residential homes.

ADVANTAGES

- Penetrates deep into concrete and chemically reacts with calcium silicate to form a bond that locks the color into the concrete surface to minimize fading and to reduce migration of the dye particles.
- When combined with the three step **Duro-Floor Color System** the resulting floor appears vibrant in color with a high gloss finish.
- Transforms plain, gray colored concrete floors into beautiful and colorful decorative concrete.
- Does not etch concrete floor surfaces.
- When combined with the **Duro-Floor Color System**, provides improved durability with reduced maintenance costs compared to vinyl composition tile (VCT), carpeting or other synthetic flooring options.
- Concentrated – Dilutes 1:7 to reduce shipping and handling costs. Packaged in 16 oz (47 mL) containers makes 1.0 gal (3.8 L) and 0.5 gal (1.9 L) containers makes 4.0 gals (15.1 L).
- Easily dilutes with water, Duro-Nox LSC lithium silicate liquid floor hardener or with any VOC exempt solvent (acetone or tertiary butyl acetate).
- Available in 18 standard colors that can be blended to create an unlimited number of colors.
- Allows the contractor or end user the ability to intermix any color to achieve unlimited color options.
- Can be applied in multiple coats to achieve deep, rich colors with greater intensity.

⚠ PRECAUTIONS ⚠

- Duro-Color is a dye – not a coating – and is not designed to cover or hide color or surface imperfections.
- Duro-Color is designed for application to diamond ground and polished concrete. Duro-Color will not penetrate machine troweled concrete floors without first grinding with planetary floor grinding equipment equipped with diamond tooling.
- Duro-Color is not designed for a first coat application over concrete floors previously treated with a liquid floor harder.
- Duro-Color is designed for use as part of the **Duro-Floor Color System**. Applications of Duro-Color by itself or with another manufacturer's products may result in premature fading, an unacceptable final finish or excessive staining.
- If Duro-Color is diluted with a VOC exempt solvent such as tertiary butyl acetate or acetone extreme

caution must be exercised to provide adequate ventilation and to eliminate all ignition sources (sparks, pilot lights, cigarettes or other open flame or heat source). It may be necessary to provide air supplied respirators to all people working in the area where Duro-Color is being applied.

- Duro-Color is not designed for exterior application or in areas subject to high levels of sunlight or exposure to ultraviolet light.
- Duro-Color is a dye; and therefore, is subject to potential fading. Using Duro-Color as a system component of the **Duro-Floor Color System**, which incorporates strong UV inhibitors, will reduce the potential for fading.
- Not for application to frozen or wet concrete or concrete that is less than 28 days old.
- Best results are obtained when Duro-Color is applied to concrete floor slabs with a moisture content of less than 5 lbs/sf.
- Duro-Color is specifically designed for application to concrete that has been mechanically prepared using planetary grinding and polishing equipment equipped with diamond tooling and is not designed for application to unprepared concrete.

PREPARATION

- Request current product literature, labels and material safety data sheets from manufacturer and read thoroughly before product use.
- Site environmental conditions, substrate conditions and construction have a major effect on product selection, application methods, procedures and rates, appearance and performance. Product literature provides general information applicable to some conditions. However, 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 that product and quantities purchased can be satisfactorily applied and will achieve desired appearance and performance under intended use conditions.
- Verify concrete to be dyed is a minimum of 28 days old.
- All surfaces to be dyed must be mechanically ground up to the equivalent of 200-grit resin bond diamonds. The floor should then be cleaned of all dust and debris. If wet cleaned, allow the floor to surface dry before applying Duro-Color.
- Verify concrete surfaces to be dyed are clean of foreign residue to include all dust, dirt, oil, grease, bondbreaker residue, adhesive residue, curing compound residue and all debris.
- Protect all adjacent surfaces not to be dyed from overspray or spray drift with plastic sheeting and tape.
- Duro-Color dye concentrate can be diluted at a mix ratio of 1:7 with Duro-Nox LSC, water or a VOC exempt solvent such as tertiary butyl acetate or acetone.
- To dilute, add one 16 oz. (973 mL) container of Duro-Color dye concentrate to a 1-gallon (3.8 L) container and fill to the top with Duro-Nox LSC, potable water or VOC exempt solvent. For larger applications, add one 64 oz. (1.9 L) container of Duro-Color dye concentrate to a 5-gallon (19 L) pail and fill to the 4-gallon (15.1L) mark with Duro-Nox LSC, potable water or VOC exempt solvent. Mix thoroughly for one minute before using. Apply diluted Duro-Color within 12 hours of mixing. Individual Duro-Color dyes can be blended to create an unlimited number of colors.
- Do not dilute or mix more Duro-Color than can be applied in 12 hours or less.

APPLICATION

- Duro-Color is typically applied at the application rate of 400-800 sf/gal (9-18 sm/L). The color intensity achieved is largely dependent upon the application rate and porosity of the concrete surface. Properly prepared surfaces will generally achieve a deep, rich color after one application.
- Apply Duro-Color with a low pressure hand pump sprayer equipped with an 8001 LP or 8002 LP spray tip using a circular, overlapping spray pattern. Immediately spread the Duro-Color with a wet microfiber pad to ensure a uniform application. Any drips or puddles should be immediately spread out with microfiber pad. Always maintain a wet edge and always work to a wall, saw-cut crack control joint or other line. While Duro-Color is still wet, make sure that footprints, streaks and spray patterns are evenly spread out with a microfiber pad.
- If over applied, Duro-Color diluted with Duro-Nox LSC can cause a white discoloration on the concrete surface that may be objectionable in appearance. Accordingly, it is very important to ensure a uniform application. Best results are achieved when the products are applied at an application rate that allows the surface to become dry to the touch in no more than 15-20 minutes. Longer dry times indicate over application and the possibility for the formation of white surface discoloration.

Optional Duro-Color Application Procedures

OPTION 1: Dilution with Duro-Nox LSC lithium based liquid floor hardener (Duro-Floor Color System)

1. Ensure concrete floor surface is ground up to the equivalent of 200-grit resin bond diamonds, and clean of all dust and debris and dry of all water.
2. Apply the Duro-Color & Duro-Nox LSC mixture with a low pressure hand pump sprayer equipped with an 8001 LP or 8002 LP spray tip using a circular, overlapping spray pattern at an application rate that allows the surface to become dry to the touch in no more than 15-20 minutes.
3. Immediately spread the Duro-Color with a wet microfiber pad to ensure a uniform application.
4. Dry times longer than 15-20 minutes indicate over application and the possibility for the formation of white surface discoloration.

◆ **Note: Any drips or puddles should be immediately spread out with microfiber pad. Always maintain a wet edge and always work to a wall, crack control joint or other line.**

5. Although not required, best results are achieved when the Duro-Color & Duro-Nox LSC mixture application is allowed to cure overnight or 12 hours prior to polishing.
6. Polish the Duro-Color dyed surface using 400-grit resin bond diamonds. Vacuum up all dust and debris created by polishing.
7. Apply a second coat of the Duro-Color & Duro-Nox LSC mixture by repeating steps 2-4.
8. Allow the dyed surface to dry.
9. Once dry, any excess residue that did not penetrate must be removed with a floor-scrubbing machine and rinsed clean with water prior to polishing.
10. Start polishing with 800-grit and working up to 1500-grit or 3000-grit resin bonded diamonds for maximum gloss.

OPTION 2: Dilution with either water or VOC exempt solvents such as tertiary butyl acetate or acetone.

1. Ensure surface is ground up to the equivalent of 200-grit resin bond diamonds, and clean of all dust and debris and dry of all water.
2. Apply the Duro-Color mixture with a low pressure hand pump sprayer equipped with an 8001 LP or 8002 LP spray tip using a circular, overlapping spray pattern at an application rate that allows the surface to become dry to the touch in no more than 15-20 minutes.
3. Immediately spread the Duro-Color with a wet microfiber pad to ensure a uniform application.
4. While Duro-Color is still wet, make sure that footprints, streaks and spray patterns are evenly spread out with a microfiber pad.

◆ **Note: Any drips or puddles should be immediately spread out with microfiber pad. Always maintain a wet edge and always work to a wall, crack control joint or other line.**

5. As soon as the first coat of the Duro-Color mixture has dried, the floor can be polished with 800-grit resin bonded diamonds.
6. Vacuum all dust and debris, and let surface dry.
7. Apply a second application of the Duro-Color mixture by repeating steps 2-3.
8. Once dry, remove excess Duro-Color mixture residue that did not penetrate with a floor-scrubbing machine and rinse clean with water prior to polishing.
9. Allow the floor surface to dry a minimum of 2 hours.
10. Apply an even, uniform coat of Duro-Nox LSC at an application rate of 500-800 sf/gal (12-17 sm/L) that allows the surface to become dry to the touch in no more than 15-20 minutes using a low pressure, hand pump sprayer equipped with an 8001 LP or 8002LP spray tip.

◆ **Dry times longer than 15-20 minutes indicate over application and the possibility for the formation of white surface discoloration.**

11. Immediately spread Duro-Nox LSC with a wet microfiber pad to ensure a uniform application.

◆ **Although not required, best results are achieved if the Duro-Nox LSC application is allowed to cure overnight or 12 hours prior to polishing.**

12. Start polishing with 800-grit and working up to 1500-grit or 3000-grit resin bonded diamonds for maximum gloss.

PROTECTION

- The final step in the **Duro-Floor Color System** is the application of Duro-Shield. Duro-Shield provides ultra-high-gloss, stain protection, slip protection and fade protection from exposure to ultraviolet light. For maximum protection, apply two coats of Duro-Shield.

1. Dilute the Duro-Shield with water by adding 2 parts Duro-Shield to 1 part water by volume.
2. Apply Duro-Shield with a low pressure, hand pump sprayer equipped with an 8002 LP spray nozzle. The recommended application range is 500-1500 sf/gal (12-17 sm/L).
3. Immediately spread Duro-Shield with a wet microfiber pad to ensure a uniform application.
4. After a minimum dry time of 1-2 hours, apply a second coat by repeating steps 1-3. Refer to the Duro-Shield product data sheet for more information.

- For additional gloss, a high-speed burnisher equipped with a hogs-hair pad or a white-felt-polish pad can be used to further polish the surface.

MAINTENANCE

- Although Duro-Shield provides stain protection, all spills should be wiped up immediately.
- Do not use ammonia or amine containing detergents to clean floors treated with the **Duro-Floor Color System**.
- Nox-Crete recommends *Zep Commercial Neutral Floor Cleaner Concentrate*, diluted according to manufacturer instructions, for cleaning **Duro-Floor Color System** floors. The use of any other neutral floor cleaning product should be tested before full scale cleaning to ensure compatibility with the **Duro-Floor Color System**.
- Do not perform regular maintenance with aggressive pads such as diamond impregnated polishing pads. The use of aggressive polish pads will cause fading and loss of stain protection.
- Reapplication of Duro-Shield every 2-3 years will restore stain and UV fade protection.

TECHNICAL DATA

Odor	Mild
Flash Point	>200° F (>93° C)
Flammability	Nonflammable*
VOC	<550 g/L
Solubility	Duro-Nox LSC, Water, VOC Exempt Solvent
Bulk Density	8.1 lbs/gal (970 g/L)
Dilution Ratio	1:7

When diluted with a VOC Exempt Solvent, the flash point and flammability may change depending on the solvent used.

Complies with USDA requirements for incidental food contact.

PACKAGING

Product is packaged in 16 oz (47 mL) and .5 gal (1.9 L) plastic containers.

SHELF LIFE

Shelf life is one year. Use before the “USE BY” date stated on product packaging.

HANDLING/STORAGE

Store in a dry location within a temperature range between 40^0 F (4^0 C) and 100^0 F (38^0 C).

AVAILABILITY & TECHNICAL SERVICES

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

LIMITED WARRANTY

NOTICE-READ CAREFULLY

CONDITIONS OF SALE

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.

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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 WITH RESPECT 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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