VC-PRO-SUPERBASE EXTREME HEAT (80°F & ABOVE):

HYBRID HI-PERFORMANCE POLYUREA BASE COAT

TECHNICAL DATA SHEET (TDS)

Description

Vital Coat's **SuperBase Extreme Heat Base Coat System** (Clear, Tan or Grey) is a two-component, low odor, hybrid polyurea coating system designed primarily for use under broadcast flakes or quarts installations. The SuperBase systems require mixing with SuperBase Part B Cross Linker at a 2 Parts A to 1 Part B (2A:1B) mix ratio. The SuperBase Series Base Coats allow for broadcast systems to become a one day install system. This system exhibits very good chemical resistance and physical properties.

Primary Applications

Vital Coat's **SuperBase Extreme Heat Series** is an excellent choice for many applications.

- Commercial Applications
- Schools and Universities
- Basements
- Retail, Restaurants
- Residential Applications
- Residential Garages
- Manufacturing Facilities
- Warehouse Floors
- Healthcare and Medical Offices
- Dog Kennels

Features/Benefits

- Extreme Heat Applications
- High Solids for Maximum Adhesion
- Low Odor
- Excellent Abrasion Resistance
- Resistant to Hot Tire Peel
- VOC Compliant in all 50 States
- Impact Resistant
- Excellent Color Stability

Technical Information

Property	Result
Mix Ratio, By Volume	2A:1B = 2:1
Mix Ratio, By Weight	A:B = 100:50
Volume Solids % By Weight	Part A:100% - Part B: 100%
Density (KG/L)	Part A:1.10 - Part B: 1.0 - Mixed: 1.05
VOC Content	75.4 g/L
Flash Point	>212°F
Dilution	10% Max - Acetone

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System Properties	
Property	**Result**
Abrasion resistance, ASTM D4060, CS-17 Wheel/1000G (2.2LBS) / 1000 Cycles	25 mg loss
Flexibility 1/8" Mandrel - ASTM D1737	Pass
Viscosity @ 77°F (25°C)	90 KU
Adhesion (ASTM D3359)	5B-0% Failure
Gloss/Sheen, ASTM D523	60 Flat
Steam Resistance	Pass (Steam Sweep)
Dry Heat Resistance	Pass to 140°F
Wet Heat Resistance	Pass to 140°F
Compressive Strength	Not Tested

Packaging

This product is available in 5 US Gal. Individual Component Pails or 15 US Gal. Kits

Storage/Shelf Life

Store in a cool, dry, well-ventilated area. Keep containers tightly closed and store away from heat, sparks, open flame or oxidizing materials. Extended storage at excessive temperatures may produce odorous and toxic fumes from product decomposition.

This product has a shelf life of up to one year in its original, sealed, unopened container. If product appears to be hardened or separated contact NxTech before use. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards.

Storage Temperature Min/Max 50°- 100°F

Directions for Use

Surface Preparation:

General: Surfaces must be dry, structurally sound, free of dust, dirt, and all other contaminants and can readily accept water.

Sound Concrete and replace areas that are failing due to poor placement or extensive environmental abuse. Cracks and joints should always be treated as moving, with the possibility they will continue moving after the coating is placed. Expansion joints must always be honored since they allow movement in the slab. Holes, cracks and divots in the surface should be filled with **Vital Coat's Mender81 Crack Repair**. Semi-rigid joint fillers may be applied in control joints prior to application of the coating, but if excessive movement occurs,

a crack will form in the surface of the coating along the joint. Flexible joint sealants should only be applied after the coating is completed and cured. Expectations should be set with the client prior to commencement of the project so they understand that the coating, when bonded properly, will move as the concrete substrate does.

Old Concrete – Concrete surface must be clean, sand blasting, diamond grinder w//30 grit or coarse, or water blasting is highly recommended to remove surface contaminates. Any oils or fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application.

New Concrete – The concrete should be allowed to cure for a minimum of 30 days. Sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer or moisture barrier may be used to reduce out-gassing and promote adhesion.

Note: Any oils or fats must be removed prior to product application. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application.

Profile:

Concrete must be profiled to a CSP-2 or CSP-3 for proper bonding. Acid etching is not an acceptable option for smooth or power troweled surface. A water drop test should be performed to make sure water quickly penetrates the surface and darkens it. If water sits on the surface for longer than 15 seconds the concrete is not porous and must be mechanically profiled by shot blasting or diamond grinding. The coverage applied should be considered when choosing the coarseness of the diamond. Surface must be completely cleaned after the mechanical preparation process.

Mixing:

The amount of material mixed should only be what can be utilized within the listed pot life of the product. Each component should be mixed thoroughly with individual tools, part B may be shaken in lieu of mixing. SuperBase Extreme Heat System components are to be mixed at a ratio of 2 parts A to 1 part B (1:1) in clean mixing containers. Pour the correct ratio in and mechanically mix for 3 minutes using a Jiffy-style mixer.

Optimal Conditions at Application	
Ambient Temperature	80°F & Above
Surface Temperature	85°-95°F*
Liquid Temperature	45°-95°F*
Storage Temperature	35°-100°F

**Effects of Humidity & Temperature outside of optimal conditions. Higher temperatures or humidity cause faster cure. Lower temperature cause slower cure. It is recommended to allow an extra 24 hours cure time if installing below optimal conditions.*

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Base Coat Pot Life Test		
1 Quart	41 minutes to unusable	178°F
5 Gallon	35 minutes to unusable	191° F

Pot Life Test Results:

- *Unusable pot life is defined as drawing a line across the surface of the curing product. If it flows back, that is a PASS, if it does not flow, that is a FAIL.*
- *A Laser temperature sensor was shot on top of the product surface to obtain surface temperatures. A probe was sunk into the interior of the curing product to obtain max core temperatures.*
- *All samples were measured by weight, and mixed for 3 minutes.*

Application:

Mixed product may be poured onto the floor in thin ribbons then spread and back rolled. A flat or notched squeegee is the most efficient method to quickly get the material across the floor. Make sure to back roll in opposite direction for uniform product application. Small chip brushes or 6 – 8" wall edgers may be used along the perimeter and in more difficult to reach areas. Avoid creating puddles. Alternatively, dip and roll the product from a roller pan. Do not over-work the product.

Recoat time listed in below table is directly affected by the ambient surface temperature. Apply additional coatings as early in the recoat window as possible for the best results. Even within the recoat window it is recommended to abrade and clean the existing coat. If the recoat window has passed, it is critical to thoroughly abrade the surface with 80 to 120 grit sanding screens. Thoroughly clean the existing coating before abrading to remove potential contaminants.

Coverage/Thickness		
Recommended Thickness	10 mils	13 mils
Coverage @ Recommended Thickness	150 ft²/gal	120 ft²/gal

Note The indicated coverage is calculated for flat surfaces. A porous surface will require more material in order to cover the same area.*

Curing:

Do not touch treated surface during curing. Do not add water or allow water to come in contact while curing. Protect surface from debris coming in contact with surface while drying.

Drying/Cure Times	
Pot Life (16oz)	35 minutes @ 80°
Tack Free Time @77°F 50% RH	1-2 Hours
Min/Max Recoat Time @77°F 50% RH	2-8 Hours

Foot Traffic	2-4 Hours
Full Cure @77°F 50% RH	8-16 Hours
Dry to Touch	2 hours

Note Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.*

Clean-up

Clean all application equipment with a specified cleaner. Once the material hardens, it can only be removed mechanically. If the product splatters, wash thoroughly with hot soapy water.

Precautions/Limitations

Before handling, consult the Safety Data Sheet and Container Labels for physical and health hazard information.

Maximum relative humidity during application and curing: 85%

Substrate temperature must be 5.5 degrees F° above dew point measured

Humidity content of substrate must be < 4% when coating is applied

Do not apply on porous surfaces where a transfer of humidity may occur during application

Protect from humidity, condensation and contact with water during the 24-hour initial curing period.

Chemical Resistance			
Acetone	D	Nitric Acid 20%	NR
Ammonium Hydroxide 50%	D	Phosphoric Acid 10%	E
Water Chlorinated	E	Phosphoric Acid 50%	NR
Clorox (10%) Water	E	Skydrol	D
Diesel Fuel	D	Sodium Hydroxide 25%	E
Gasoline	D	Sugar Water	E
Hydrochloric Acid 20%	D	Sulfuric Acid 10%	E
Isopropyl Alcohol	E	Sulfuric Acid >50%	NR
MEK	NR	Sugar Water	E
Methanol	E	Sulfuric Acid 10%	E
Motor Oil	E	Sulfuric Acid >50%	NR
Muriatic Acid 10%	E	Vinegar/Water 5%	E
Xylene	D	Water	E

E	=	Excellent
D	=	Discolors
NR	=	Not Recommended

Health and Safety

Always wear proper safety equipment to protect eyes and skin. Keep a neat, clean mixing area to avoid potential safety issues. Make sure to read and understand all SDS sheets and become familiar with all application procedures and best practices. Recommended for use by professionals only! In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. For more information, consult the material safety data sheet.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Important Notice

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Revisions: