

Microcote HPU™ - HIGH PERFORMANCE, 2 PART POLYURETHANE COATING

Description

Microcote HPU™ is a premium two component, ultra-low VOC, virtually odourless, high performance, water-based, water reducible, non-yellowing aliphatic acrylic polyurethane coating.

Microcote HPU™ offers a gloss, satin and matte finish with excellent chemical and abrasion resistance. Microcote HPU™ is a flexible urethane that can be used for horizontal and vertical applications.

- Gloss, Satin and Matte – Clear & Colours
- Low VOCs – Less than 50 g/l
- Upon mixing Parts A & B – mixture has no free monomers
- Single coat application direct to most surfaces without the need of a primer.
- Interior and limited UV exposure exterior use

Features And Benefits

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| Tough film | Virtually odourless |
| Water borne graffiti resistant coating | Single coat application to most surfaces |
| Excellent adhesion to most surfaces | Available in a gloss, satin and matte finish |
| Excellent flexibility | Tintable to virtually any colour |
| Low VOC | Good coverage |
| Rapid application | Easy repair and reapplication |

Substrates

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| Resilient floors – vinyl, rubber, linoleum | Tiles – ceramic, terrazzo, porcelain, stone – porous to high gloss. |
| Timber – sports floors, engineered and solid timber floors, parquetry, decks, doors, tables. | Metal – ferrous and nonferrous metals, fabricated metal products, door and window frames. |
| Concrete – floors, carparks, warehouses, cool rooms, walkways, stairs, walls, benchtops, pool surrounds, kitchens, retail. | Vertical surfaces – Dry wall, hand rails, brick and block walls, previously painted surfaces, wall vinyl, laminates. |

Recommended Markets

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| <p>Airports / Transportation</p> <p>Sporting & Entertainment Venues</p> <p>Anti-Graffiti Systems</p> <p>Auto Dealerships</p> <p>Chemical & Petrochemical</p> <p>Commercial Buildings</p> <p>Education</p> <p>Food & Beverage Industry</p> <p>Health & Aged care</p> <p>Hospitality</p> | <p>Industrial Equipment</p> <p>Marine Industry</p> <p>Pharmaceutical</p> <p>Railcar / Transport Vehicle</p> <p>Restaurant / Food Service</p> <p>Animal Health</p> <p>Childcare</p> <p>Warehouse / Manufacturing</p> <p>Local Council</p> <p>Correctional Facilities</p> |
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Product Characteristics

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| Finish: | Gloss: ~85% Gloss (60° Angle) | |
| | Satin: ~55% Gloss (60° Angle) | |
| | Matte: ~25% Gloss (60° Angle) | |
| Colour: | Clear & Colours (see colour card) | |
| Weight Solids (Clear): | 51% ± 3% before reduced | |

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| Weight Solids (Colour): | 55-65% ± 3% before reduced |
| Volume Solids (Clear): | 49% ± 3% before reduced |
| Volume Solids (Colour): | 47-58% ± 3% before reduced |
| VOCs (Clear): | <50 g/l |
| VOCs (Colour): | <50 g/l (note 2) |
| HDI Monomer Content: | <0.04 |
| <u>Recommended Spreading Rate Per Coat:</u> | |
| Vertical Surfaces | Wet thickness: 100 – 125 microns Dry thickness: 60 – 75 microns |
| Horizontal Surfaces | Wet thickness: 150 - 200 microns Dry thickness: 90 - 120 microns |
| Actual Spread Rate: | 200 – 400 sq. ft. per gallon, 5 – 10 sq.m per litre |
| Application Viscosity: | 65-75 KU catalysed & reduced |
| Drying Schedule at 24° C: | |
| To Touch: | 6-8 Hours (3-4 hours with accelerator) |
| To Handle: | 8-10 Hours |
| To Walk On: | 10-12 Hours |
| Full Cure: | 2 Days |
| Pot Life at 24° C: | 90 minutes (45 minutes with accelerator) |
| Sweat-In/Induction Time: | 2 Minutes |
| Shelf Life: | 12 Months @ 75° F (24°C) |
| Flashpoint: | > 185 ° F |
| Recoat Times at 24° C: | Within 24 hours lightly abrade with 160 mesh screen. After 24 hours, sand with 120 mesh screen. |

Note 1: Depends on the colour

Note 2: Excludes the colorant and depends on the colour

Performance Characteristics

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| <u>Substrate Tested:</u> | Steel |
| <u>Surface Preparation:</u> | Wash with water-based biodegradable neutral cleaner |
| <u>Application:</u> | Direct to Surface |
| <u>Pencil Hardness:</u> | Scratch: 2H |
| (ASTM D3363) | Gouge: 3H |
| <u>Abrasion Resistance:</u> | 33 mg loss |
| (ASTM D4060) | |
| <u>Tensile Adhesion:</u> | 1,600 – 1,800 psi |
| <u>Impact Resistance:</u> | 160 in-lbs. |
| <u>QUV 1,000 Hours:</u> | Passed SSPC Paint 36 Standard of: |
| (ASTM D4587) | |
| <u>Colour Change:</u> | Less than 2.0 Delta E Change |
| <u>Gloss Change:</u> | Less than 30% Gloss Change |
| <u>Flexibility – Conical Bend:</u> | % Elongation: >32% |
| (ASTM D522) | Resistance to Cracking: <1/8" diameter |
| <u>Condensing Humidity 1000 Hours</u> | Rusting: None |
| (ASTM D2247) | Blistering: None |
| <u>Salt Fog 1,000 Hours:</u> | Rusting: 10 (None) |
| (ASTM B117) | |

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| Application / Storage Conditions | | | | | |
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| Conditions | Material | Surface / Ambient | Humidity | Pot Life / Dry Time | Product Storage |
| Normal | 18° – 30°C | 18° – 30°C | 35 – 65% | None | 24° C |
| Minimum | 5° C | 5° C | 0% | These temps increase dry to touch and full cure times | 5° C |
| Maximum | 30° C | 38° C | 90% | These temps decrease working pot life | 32° C |

Do not apply the products when the substrate temperature is less than 3°C above the dew point.

| Application Guidelines | |
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| Equipment | <p>Airless Spray: Unit: 2,000 – 2,400 psi Tip: 0.015 – 0.017 Hose: 1/4" or 3/8" Note: Do not use over 50 ft. hose</p> <p>Air-Assist Sprayer: Unit: 500 – 600 psi Tip: 0.015 – 0.017 Tip Pressure: As needed for proper atomization</p> <p>Conventional: DeVilbiss pressure pot with ± GA 503 gun and FF needle assembly with 777 air cap.</p> <p>Roller: Vertical surfaces use ¼" woven nap, phenolic core. Horizontal surfaces use 3/8" woven nap, phenolic core.</p> <p>Brush: Nylon polyester blend</p> |
| Mixing Instructions (All products have a 3:1 ratio) | <p>DO NOT SHAKE. Separately stir each component thoroughly. The flattening agents in the Part A resin may settle to the bottom of the can and cause a clumpy appearance; even more so in the Matte. Stir the Part A for 2 minutes or until the flattening agent suspends into the mixture and no clumps are present. Then mix the premeasured Part B with the Part A. Mix combined Parts A & B thoroughly by hand or slow speed drill to ensure they are blended together, but avoid incorporating air during mixing. DO NOT MIX THE PRODUCT WITH A HIGH SPEED MIXER. Allow a 2 minute "induction time" for the mixture of Parts A & B. After the 2 minutes, the mixture of Parts A & B should be poured into a larger container for water reduction and to maximize pot life.</p> <p>Reduce the combined mixture of Parts A & B by slowly adding Clean Tap Water at 2% to 15% depending on application method and surface. Reduce less for vertical surfaces, high humidity and more porous substrates. Reduce more for horizontal surfaces, low humidity and smooth substrates. Do not mix more than 2 gallon kits of Microcote HPU™ at a time in a 20 Litre container because the product is mass sensitive; increasing mass will reduce pot life.</p> <p>To commence applying the product, once properly mixed per above instructions, the product should be poured off (increasing surface area) into a roller pan or other suitable containers in order to maintain the 90 minute pot life. If spraying the product from 5 gallon containers the pot life will be reduced to 20 minutes; therefore it must be sprayed within 20 minutes. Do not mix product towards the end of or past its pot life with freshly catalysed material; discard unused product at the end of pot life. Do not reseal containers once product is catalysed. Clean up with Acetone or Xylene.</p> |
| Masking | <p>Spraying Microcote HPU™ is similar to applying any other spray applied coating. It is essential that all areas that you do not wish to coat are covered or masked. This is especially important when spraying around windows, doors or adjacent to floor or ceiling surfaces that you do not wish to coat. Careful masking will protect the adjacent surfaces while leaving clean, sharp edge lines. Ensure that you mask any floor surfaces at the base of the walls being coated. Some of the sprayed material will bounce away from the surface and will fall to the ground. This material will adhere to the surface when it lands and may be difficult to remove from tiles or timber flooring. Newspaper makes an ideal protective layer for around the base of walls.</p> <p>Important Note: For best results, remove the masking promptly after you have finished applying Microcote HPU™ while the coating is still wet. If the coating has been allowed to sit and is starting to dry, allow it to dry completely before removing the masking. Removing the masking when the coating is partially dried can lead to edge peeling and tearing.</p> |

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| Surface Preparation | <p>Steel: Remove all loose rust, dirt, grease or other contaminants per SSPC-SP1, SSPC-SP2 and SSPC-SP3 (e.g., low or high pressure with cleaner).</p> <p>Aluminium: Remove all oil, grease or soap film with a neutral biodegradable detergent or emulsion cleaner.</p> <p>Galvanized Metal: Remove all oil, grease or soap film with a neutral biodegradable detergent or emulsion detergent.</p> <p>Concrete / Masonry / Concrete Blocks: Clean masonry substrates with neutral biodegradable detergent or emulsion cleaner to remove laitance using low or high pressure washer. For high build systems, use Acrylic/Epoxy Primer for first coat (Note: Due to the vast differences in concrete substrates consult your Bio Surfacesales representative for the proper coating system specifications).</p> <p>Wood: Sand new wood to remove any surface contaminant and to lower grain. Previously finished wood should be sanded to provide good adhesion. Test patches are recommended.</p> <p>Previously Painted Surfaces: Properly clean the surface of all dust, dirt, grease and foreign matter. Apply a test patch of the Microcote HPU™ to ensure adhesion of the Microcote HPU™ to the previously painted surface and also to ensure there will not be any delamination of the previously painted coating from the substrate.</p> <p>Note: In order to insure optimum performance, remove the previous coating to bare substrate and then apply the coating system as specified by your Bio Surfacesales representative.</p> <p>Anti-Graffiti System: Follow appropriate surface preparation as noted above. For optimum performance use two coats of the Microcote HPU™.</p> |
| Clean Up | Microcote HPU™ is a water based product and all equipment will clean up easily in water. Do not allow the Microcote HPU™ to dry on the equipment or it will be very difficult to remove and you may need to use a solvent based paint stripper. |

| System Performance Data | | | | |
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| Material Tested | Test Method | Unit of Measure | Result* | Comments |
| Microcote HPU™ on porcelain tile with GripLok Standard (500g per Gallon/4L Kit) | AS4586 Wet Pendulum | AS 4586-2013, Slip resistance classification of new pedestrian surface materials | P5 | Slip ratings are surface dependent always test before application. |

| Health And Safety | |
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| Safety Precautions | Read Data Sheet, Material Safety Data Sheet and any precautionary labels on containers. Data sheets available at www.verzon.com.au/vezon-technical-information/ |
| Storage | Microcote HPU™ components are NOT classified as dangerous goods for transport or storage. Store in well ventilated bunded area under cover and away from sources of heat. Keep containers closed at all times. |
| Handling | As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking or using the toilet. |
| Using | Use with good ventilation and avoid inhalation of spray mists and fumes. If risk of inhalation of spray mists exists, wear combined organic vapour/particulate respirator. When spray painting, users should comply with the provisions of the respective State Spray Painting Regulations. This product contains silica. Dry sanding should therefore be avoided and if it cannot wear appropriate respiratory protection. |
| Flammability | This product is NOT flammable. |
| Welding | Avoid inhalation of fumes if welding coated surfaces. |

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| Transport And Storage | | | |
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| Packaging | Available in 1 Gallon/4 Litre & Quart/1Litre kits | Transportation | 1.34 kg/litre (Average of components) |
| Dangerous Goods Part A - | | | |
| Class | Part A: Non Dangerous Goods | | |
| Dangerous Goods Part B - | | | |
| Class | Part B: Non Dangerous Goods | | |

Disclaimer

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The data provided is correct at the time of publication; however it is the responsibility of those using this information to check that it is current prior to specifying or using any of these coating systems.

Coating systems can be expected to perform as indicated so long as substrates, preparation, mixing and application procedures are followed as recommended. Information and instructions can be found at www.biosurfaces.com.au

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