



nano-Coat 45AMD

BDT-45AMD Antimicrobial Disinfectant n-Ceramic Coating

Technical Data Sheet

nano-Coat 45AMD is a clear when cured, easy to apply Antimicrobial Disinfectant formulation that helps to significantly lower the bio-burden and continuously protect treated surfaces from the colonization of bacteria, mold, mildew and fungus while the disinfectant additive in the formulation kills bacteria and viruses such as; **Corona Virus-Human, HIV, HCV & HBV** and more than 140 others from cleaned, product coated surfaces for as long as the coating remains intact.

nano-Coat 45AMD is a high performance, specially synthesized polysilazane polymer coating, intended for heavy use, that ambient cures and develops a covalent bond with the substrate it is applied to. This bonds the antimicrobial coating and the surface on a molecular level. A spray/wipe-on, rinse free solution, nano-Coat 45AMD disinfects the surface while being applied and continuously protects as long as the coating remains. The active ingredients are non-leaching and the coating is inert and benign when cured.

nano-Coat 45AMD is an extremely hydrophobic coating with super slick properties that greatly reduce the ability of dirt and debris to bond to applied surfaces due to the radical reduction in the coefficient of friction. **nano-Grip** may also be added where traction is needed.

nano-Coat 45AMD works on any clean dry surface type including metal of all types, plastics, wood, glass, granite/stone, access handles of any kind, doorknobs, commercial & residential kitchens - counters cabinets and appliances, bathrooms, floor surfaces of virtually every kind. Treat almost anything or any surface area that experiences high hand or foot traffic for years of surface and antimicrobial disinfectant protection.

nano-Coat 45AMD is also available with “**nano-Grip**”, and although smooth to the touch when cured and dry, it will offer an extremely slip resistant grip in wet conditions from water, oil and even blood/body fluids. Aggregate additives (traditional non-skid ie. sand, pumice) are available as well; ideal for marine surface, deck & external heavy-weather use.

nano-Coat 45AMD has an excellent UV inhibitor, has high chemical resistance and is invulnerable to standard protocol cleaners. Our coatings contain an optical brightener that illuminates under special uv or black light and provides an effective means of physical inspection and verification of a present & functioning antimicrobial disinfectant coating. Applicators and consumers can easily verify that all intended surfaces were initially coated or, upon periodic inspection, have remained intact and still offering the intended antimicrobial protection.



nano-Coat 45AMD is our most robust coating for high hand traffic areas that receive the greatest amount of residual touch, continuous surface abrasion and most frequent chemical protocol cleaning. ***This coating is used in Single Coat Application, by trained installers.***

nano-Coat 45AMD - Properties:

- Color _____ Clear
- Viscosity _____ 16-18 sec. #2 Zahn
- Percent of Solids _____ 32
- Odor (liquid) _____ Slight mint smell
- Odor (cured) _____ Slight mint smell
- V.O.C. _____ Exempt per CFR 51.1 / regulation 8
- RoHS _____ Compliant
- Halogens _____ None
- Conical Bond (1/8 inch mandrel) _____ Passed (ASTM D522-93a)*
- Cross cut adhesion _____ 5B (ASTM D3359)*
- Coefficient of Friction _____ 0.03 μ (ASTM D2047)
- Specific Gravity _____ 0.889 (ASTM D891-09)
- Pencil Hardness _____ 9h+ (ASTM D3363)*
- Average applied dry film thickness _____ 3 to 10 microns
- Estimated Coverage Rate(@ 3 microns) _____ 3,800 sq./ft. per gallon
- Transfer to surrounding material _____ Zero (0) transfer of contaminants
- Dry to Touch (time @ ambient) _____ 15 – 25 minutes (average)
- Useable surface within _____ 12 hrs.
- Ambient cure (full properties) _____ 5 days

EPA Reg. No. 83019-1

FIFRA Reg. no. 61178-5, Refer to EPA list N

EPA Est. No. 96461-GA-1



Application

- Simply wipe-on using a soft product wetted cloth, foam roller or trigger spray followed by a light pressure wipe to leave a uniform thin coating on the surface.
- Allow to completely dry.
- Electrostatic and other highly technical spray applicators may be used to great benefit. In the hands of highly trained technicians, these tools reduce waste and obtain a more thorough, evenly applied and complete coating. This promotes the cross-linking of electrons between the substrate and the coating, which becomes a completely covalent bond when the coating has fully cured.
- Warmer than the ambient temp as well as an increase in air flow will reduce the amount of time needed to achieve 'Dry to Touch', generally 20-30 min.
- Exposure to sunlight will also assist in reducing the amount of time needed for a fully cross-linked cure.

nano-Coat 45AMD's antimicrobial disinfectant formulation helps to continuously kill and protect coated surfaces from the colonization of the following list of microorganisms, significantly lowering the bio-burden upon that surface for an extended period of time.

MICROORGANISM EFFECTIVE KILL LIST

Human Viruses

Adenovirus type 2 – Cytomegalovirus – HBV (Hepatitis B Virus) – HCV (Hepatitis C Virus) – Herpes Simplex type 1 Virus – Herpes Simplex type 2 Virus – HIV-1 (AIDS Virus)

*Human Coronavirus

Influenza A/Brazil Virus – Influenza A/Victoria(H3N2) Virus

Influenza A2-Asian Virus – Influenza B Virus (Allen strain) – Influenza C Virus (Taylor strain) – Measles Virus

Non-Human Viruses

Avian Influenza/Turkey/ Wisconsin Virus

Canine Coronavirus – Canine Distemper Virus – Canine Herpesvirus

Equine Herpesvirus – Equine Influenza

Feline Calicivirus Norovirus – Feline Infectious Peritonitis –

Infectious Bovin Rhinotracheitis (IBR) – Newcastle Disease Virus



Isolates From AIDS Patients

Aspergillus niger – Candida albicans
Cryptococcus neoformans

Gram Positive Clinical Isolates

Staphylococcus aureus (Toxic shock) – Staphylococcus epidermidis – Staphylococcus saprophyticus

Gram Negative Clinical Isolates

Acinetobacter calcoaceticus var. anitratus – Acinetobacter calcoaceticus var. Iwoffii Bordetella bronchiseptica – Brevundimonas diminuta

Burkholderia cepacia – Enterobacter agglomerans – Enterobacter cloacae – Enterobacter gergoviae – Enterobacter liquefaciens – Escherichia coli (Urinary) – Escherichia coli (Wound) – Flavobacterium meningosepticum – Hafnia alvei

Other Bacteria

Actinobacillus pleuropneumoniae – Actinomyces pyogenes – Bacillus cereus – Bacteroides fragilis – Corynebacterium ammoniagenes, (Brevibacterium ammoniagenes) - Bordetella bronchiseptica – Burkholderia pickettii

Parainfluenza type 1 – Poliovirus type 1 (Chat strain) – Respiratory Syncytial Virus - Rotavirus
Vaccinia Virus

Porcine Parvovirus – Porcine Respiratory & Reproductive Syndrome Virus – Porcine Rotavirus – Pseudorabies Virus – Transmissible Gastroenteritis (TGE) T1 bacteriophage – T4 bacteriophage – Vesicular Stomatitis Virus (VSV) Bovine – Viral Diarrhea Virus (BYDV) – Avian Influenza Virus (H5N1)

Pseudomonas aeruginosa – Staphylococcus aureus – Streptococcus pneumoniae – Streptococcus haemolyticus – Streptococcus pyogenes

Klebsiella oxytoca – Klebsiella pneumoniae – Morganella morganii – Proteus mirabilis - Proteus vulgaris – Pseudomonas aeruginosa – Pseudomonas fluorescens – Pseudomonas pseudomallei – Pseudomonas putida – Pseudomonas stutzeri – Serratia marcescens – Sphingomonas paucimobilis

Campylobacter jejuni – Chryseomonas luteola – Corynebacterium pseudotuberculosis – Enterobacter aerogenes – Enterococcus faecalis – Enterococcus faecium – Enterococcus hirae – Escherichia coli



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