SDS bonic



GENERAL BUSINESS ACTIVITIES

SDS-Bionic Worldwide Limited revolutionizes how the world engages Protective Covering and Sealant Solutions.

The company deploys its proprietary Nano-Molecular Technologies to manufacture a full line of Coatings and Sealants for all substrates that is marketed under the Trade Name – blonic





KEY PROCESSES

SDS-Bionic products not only use covalent and ionic molecular bonds to link together the nano particles used in the surface coatings themselves but also to link the coatings to the surface.



1. The covalent bonding between the coating and the substrate "welds" the substrate and the coating together as a single structure providing unsurpassed adhesion.



2. SDS-Bionic Molecular Products actually become one with the surface to which it is applied.



3. A virtually impenetrable barrier of protection is created. SDS-Bionic Coatings and Sealers extend the life of equipment, machinery, buildings, and objects; they protect, preserve, and enhance your assets.



CONCRETE

SDS-Bionic Concrete Coat is a coating for protecting concrete and masonry surfaces from the destructive forces of water, chloride ion penetration, food and beverage acids, bird and animal waste matter, salt spray, gum, and graffiti.

METAL

SDS-Bionic Metal Coat is a quartz coating for all metal surfaces. Metal Coat is peel and flake resistant and designed to protect metal surfaces from normal destructive forces, providing a long lasting barrier that provides superior resistance to rust, moisture, corrosion, salt spray, acid rain, UV damage, oxidation, galvanic corrosion, animal & bird waste damage, graffiti and reduces ice adhesion.





GLASS

SDS-Bionic Glass Coat H2O Hydrophobic delivers an invisible, durable coating by chemically bonding to surfaces. Once on the surface, depending upon the substrate, it can impart water repellent, antistatic, release, and lubricious properties.

MARINE & HULL

SDS-Bionic Marine & Hull Coat is a thin 2 part, clear, and extremely smooth pesticide and heavy metal-free coating of quartz that inhibits the growth of most marine grasses, barnacles, and mussels from metal ship and boat hulls to provide better fuel economy and reduced cleanings.





WELCOME

SDS-BIONIC WORLDWIDE, LTD., is a high-tech development and manufacturer — owning exclusive worldwide rights — to cutting-edge technologies and emerging high-profile products — that has the potential of revolutionizing the protective-shield coating of consumer products and industrial / government applications especially within the fields of Household, Automotive, Building / Infrastructure Maintenance and Energy. The marquee asset of SDS-BIONIC is its proprietary rights, title and interest in the underlying Intellectual Properties of its current technologies that — as a unified technology — thrusts the product line onto the threshold of extraordinary growth.

The SDS-BIONIC Shield - The proprietary and trade-secret SDS-BIONIC nanomolecular driven technology coats substrates with an invisible shield having the resiliency of 9.4 on the MOHS scale of Mineral Hardness (Diamond is 10.0 on the MOHS scale). The environmentally friendly treatment renders surfaces chip-and-scratch resistant plus fireproof. The SDS-BIONIC Shield has a myriad of applications: (a) Bridges become corrosion proof (The Golden Gate Bridge, Highway and Transportation District is currently evaluating the shield that has been applied to a section of the bridge in 2012); (b) Automobile windshields and paint become chip and crack proof; (c) fabrics are rendered water and stain proof; (d) coated buildings and signage become graffiti-proof (the graffiti is removed by water and detergent); (e) treated flooring results in a permanent high-luster finish that is wear- resistant, will not stain or require wax buffing ever again. The revolutionary SDS-BIONIC technology has the capability to out-perform ALL current commercial coating treatment techniques — in terms of: universality, efficiency, safety and economics.



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SDS BIONIC CONCRETE COAT

Concrete surfaces need protection. The sun and the elements attack surfaces constantly. Traditional coating methods have become less and less effective and use adhesives which then peel, flake, and bubble. Surface protection now takes a technological leap forward with SDS Bionic Concrete Coat.

SDS Bionic Concrete Coat utilizes new molecular science and nanotechno logy to create a covalent and ionic bond with the substrate. This eliminates voids and forms an entirely new clear surface which provides superior resistance to moisture, stains, chloride ion penetration, dirt, ice, mild acids, bird and animal waste, and graffiti.

APPLICATION

Always wear OSHA approved respiratory protection, safety goggles and gloves. Provide fresh air and exhaust in the work area.

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, other foreign matter and silicone.

Roll-on or spray-on with acetone proof sprayer.



CONCRETE COAT

SAFETY DATA SHEET

DATE OF PREPARATION

September 8, 2014

SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT NUMBER

T2G---CC

PRODUCT NAME

SDS-Bionic Concrete Coat

Regulatory Information Medical

Emergency 800-424-8802

Transportation Emergency* 911

*for Chemical Emergency ONLY (s 800-424-9300 pill, leak, fire, exposure,

or accident)

SECTION 2 – HAZARDS IDENTIFICATION

NFPA Est.	HMIS Est.
Health: 2	Health: 2
Fire: 3	Fire: 3
React: 1	React: 1
Personal Protection	С

Flammable Irritant





ROUTES OF EXPOSURE

INHALATION of vapor or spray mist EYE or SKIN contact with the product, vapor, or spay mist

EFFECTS OF OVEREXPOSURE

EYES: irritation, redness SKIN: irritation, redness INHALATION:

headaches or dizziness

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	C.A.S Number	Concentration
Polymer A-1	Proprietary	10-12
Polymer A-2	Proprietary	6-8
Ethyl Alcohol	64-17-5	6-8
t-Butyl Acetate	540-88-5	54-56
Resin	Proprietary	16-18

SECTION 4 – FIRST AID MEASURES

Eyes: Check for and remove any contact lens. Immediately flush eyes with plenty of water for at least 15 minutes lifting eyelids occasionally. Get medical attention.

Skin: In case of skin contact, wash thoroughly with water or soap and water if available. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation: Remove affected person to fresh air. Seek immediate medical attention if breathing difficulties occur. Also keep patient half sitting with upper body raised.

Ingestion: If accidentally swallowed, rinse mouth thoroughly with water and, afterwards, drink plenty of water. In case of discomfort, obtain medical attention. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel.

SECTION 5 – FIREFIGHTING MEASURES

FLASH POINT:	LEL	UEL	FLAMABILITY
<25C (77 F)	NA	NA	CLASSIFICATION RED LABEL Flammable,
			Flash below 100 °F (38 °C)

EXSTINGUISHING MEDIA

Dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors. Do not release runoff from fire to drains or watercourses.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Closed containers may explode when exposed to extreme heat. This material may produce a floating fire hazard sensitive to static discharge.

SPECIAL FIRE FIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiec6 - demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Dike area to prevent spreading. Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not flush to sewer! Dispose of as a chemical waste in accordance with current local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

DOT STORAGE CLASS: class 3

PROPER DOT SHIPPING NAME: Coating Solution

HANDLING: Provide good ventilation or extraction. Avoid prolonged or repeated breathing of vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flames and other sources of ignition. Wash hands thoroughly after handling.

STORAGE: Avoid storage over 100° F, contamination with incompatible materials. Keep containers tightly closed in a cool, well ventilated place. Protect from moisture. Avoid all sources of ignition. Residual vapors might explode on ignition. Do not apply heat, cut, drill, and grind or weld on or near this container. Keep container closed when not in use.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

VENTILATION SYSTEM

Positive fresh air exhaust should be provided in the work area. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use.

SKIN PROTECTION

Avoid skin contact. Wear butyl-rubber gloves and impervious protective clothing.

EYE PROTECTION

Do not wear contact lenses. Chemical safety goggles or splash shields are recommended.

 Ingredient
 ACGIH TLV
 OSHA PEL

 Ethyl Alcohol
 1000ppm
 1000ppm

 t-Butyl Acetate
 200ppm
 200ppm

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: NA @ 20° C VAPOR DENSITY: Heavier than air

SPECFIC GRAVITY: 1.02 BOILING POINT: >90°C

SOLUBILITY IN WATER: Insoluble

APPEARANCE: Clear to Amber slightly milky liquid

ODOR: Mild fruity

VOLATILE ORGANIC COMPOUNDS: <100 g/I

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen.

INCOMPATABILITIES: oxidizers, alkalis, acids, aliphatic amines, nitrates, water HAZARDOUS POLYMERIZATION: may

SECTION 11 – TOXILOGICAL INFORMATION

Ingredient	Target Organs	IARC CATEGORY
Polymer A-1	IRR, LIV, KID	NO
Polymer A-2	IRR, LIV, KID	NO
Ethyl Alcohol	HEART, IRR, LIV, KID	NO
t-Butyl Acetate	IRR	NO
Resin	NONE	NO

ABBREVIATIONS:

IRR = Irritant LIV = Liver KID = Kidney

Toxicity to Animals

Oral LD 50

Ethyl alcohol 2000 mg/kg rabbit

Dermal LD 50

Ethyl Alcohol 20,000 mg/kg rabbit

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available

SECTION 13 – DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 – TRANSPORT INFORMATION

DOT and IATAHazard Classification: Class 3 Flammable Liquid

Proper DOT Shipping Name: Coatings Solution

Identification Number: DOT – UN 1139 IATA– UN 1139

SECTION 15 – REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION CAS number Chemical Compound

64-17-5 Ethyl Alcohol

540-88-5 t-Butyl Acetate

CALIFORNIA PROPOSITION 65

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

IMPORTANT LIABILITY DISCLAIMER

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct as it was obtained from sources we believe are reliable. However, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.

LABEL



PRODUCTS





CONCRETE COAT

SDS-BIONIC CONCRETE COAT

DESCRIPTION

SDS Bionic Concrete Coat is a coating for protecting concrete & masonry surfaces from the destructive forces of water, chloride ion penetration, food & beverage acids, bird and animal waste matter, salt spray, gum, and graffiti. Concrete Coat is peel and flake resistant. Available in a gloss or satin finish. Can be applied over SDS Bionic Quick Seal & Enhance.

SURFACE

Concrete walls & structures, floors, masonry pavers, bricks, cement block.

SOLUTION

Moisture, most stains, mild acids, bird & animal waste, graffiti.

CHARACTERISTICS

Color: Clear to slight amber to rose (depending on temp and humidity) always dries clear.

Finish: Gloss or Satin

Vehicle Type: Solvent Base

Flash Point: (C Penskey-Martens closed Cup) 25°C/77°F

VOC: less than 100 g/L

Weight per Gallon: 7.36 lb

Non-breathable

TESTING

ASTM D-3363 Film Hardness Taper, 39.11 average

ASTM D-2047 Static Coefficient passes ADA requirements*

E96-10 Water Vapor Transmission, average WVT 0.8053 gr/ft2/hr, average perms 1.9406 gr/ft2/hr

G155 Xenon Arc, wavelength 340nm irradiance 1.0 w/m2 500 hours, slight change

*Always obtain independent retest of the static coefficient after applying any coating on walking surface to verify new application meets OSHA requirements.

SPREAD RATE

Recommended Spread Rate per coat:

Wet mils: 2.5-3.5

Dry mils: 1.5-2.1

COVERAGE

Coverage: 400-600 sq ft./gal (approximate)

Coverage will vary depending on the porosity and texture of the substrate as well as the applicator's method of application.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material. Any existing floor that has retained oil must be completely free from any further wicking action as this will prevent a bond and the coating will delaminate.

IMPORTANT; REMOVE ANY SILICON

SDS Bionic Concrete Coat will not adhere to silicones or polymer modified grouts. To determine if the surface is previously sealed or coated, sprinkle water onto the surface. If the water is absorbed and the surface becomes darker it has not been sealed. If the water beads up, there is a coating or sealer that must be removed to allow adhesion of SDS Bionic Concrete Coat to the substrate. To remove silicon sealers, use SoSafe Spray Away pH Boosted for unpainted surfaces. Rinse with fresh water and allow to dry. Moisture content not to exceed 13% before applying is required.

Pre-sealing Required on Unsealed/Porous Concrete

On unsealed or porous concrete, you need to apply a sealer first such as SDS Bionic Quick Seal & Enhance to prevent the concrete surface from absorbing too much of the SDS Bionic Concrete Coat rendering it ineffective. If enhancement is not desired, use any good water based sealer that does not contain silicone.

New Concrete or Masonry Surfaces

If in sound condition, clean the surface of all foreign material including dirt, dust, grease, oil, loose particles, laitance, coatings, and curing or release agents. SoSafe Spray Away pH Boosted unpainted surfaces. Rinse with fresh water and allow to dry. Moisture content should not exceed 13%. Smooth surfaces should be abraded to 220 grit by sand or bead blasting or grinding with a floor machine. Test the surface for the proper ph balance of between 7 and 9.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Use SoSafe Spray Away Concentrate for painted surfaces. Rinse with fresh water and allow to dry. If the paint is peeling or badly weathered, re-application of the existing paint may be necessary. If re-paint is required proceed with that process outlined by the paint manufacturer, then apply SDS Bionic Concrete Coat following the paint manufacturer's reapplication time table. If re-paint is not necessary the old paint will require mechanical abrading to 220 grit before applying the SDS Bionic Concrete Coat.

APPLICATION INSTRUCTION Test Area

Due to the wide variety of texture and porosity of concrete and masonry surfaces and the various methods of application and environments, test SDS Bionic Concrete Coat in an inconspicuous location to ensure adhesion, and determine that the desired look is achieved. There will be a slight enhancement or change in appearance from the natural surface along with a shine either gloss or satin depending which finish is chosen.

Application

SDS Bionic Concrete Coat can be applied with an acetone/alcohol proof pump sprayer with a grey or red fan tip or rolled on using a high density ultra smooth roller. With either method of application, always mask off any adjacent surfaces to keep them free of drips or accidental coating. Always provide positive fresh air and exhaust when applying indoors and make certain there is no possible ignition source such as a pilot light. When applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% RH or less and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried.

Pump Sprayer

Shake the contents thoroughly in the container to re-suspend the nano particles that have settled to the bottom before pouring into sprayer. Typically about 1/4" of buildup will be present in the bottom of the can. All of this needs to be resuspended for the coating to perform. Make certain to re-shake every 15-20 minutes to re-suspend the settling nano particles to ensure proper performance. Using an SP brand acetone/alcohol proof pump sprayer or equivalent, install a grey or red fan tip on the wand as this provides the most even application. The SP sprayer is equipped with a valve stem like on a car tire. It is recommended to keep an even amount of pressure while spraying in order to keep a consistent look. We recommend hooking up a compressor and air hose with a quick release to the valve steam on the SP sprayer and then supply the SP sprayer with a constant 35 PSI. This will provide an even flow and finish. To start spraying hold the tip square to the surface being coated at a distance of 8" to 10" off the floor. In a separate container begin spraying into the container to avoid initial spitting of product on the floor caused from air trapped in the spray wand. When you stop spraying also stop the flow in the separate container as spray wands often drip a few drops after handle is released. You want to provide even distribution of the coating so a smooth right to left then up and down pattern at a fairly fast rate should provide good coverage. This product should go on thin and never allow puddling. It is always best to spray on a few mock ups to get the feel of putting down this product before attempting an actual project. Be careful not to apply too thick (THIN TO WIN) or allow the product to puddle as this will cause too much surface tension and possible bubbles or delimitation. Do not apply a second coat unless there is a flaw in your application of the first coat. If a second coat is necessary, wait 24 hours for the surface to dry. Then abrade the surface with 220 grit sandpaper on a buffing floor machine to allow the second coat to bond. Clean floor of dust and reapply.

Roller

Shake contents thoroughly in the container to re-suspend the nano particles that have settled to the bottom. Typically there will be approximately ¼" of build up in the bottom of the can that you need to re-suspend for the coating to perform. Make certain to re-shake every 15-20 minutes to re-suspend the nano particles, this will ensure proper performance. Using a high-density ultra smooth roller, roll onto surface in a cross-pattern; left to right, then up and down, always keeping a wet edge. Make certain the roller is completely saturated at all times. Do not apply a second coat unless there is a flaw in your application of the first coat. If a second coat is necessary wait 24 hours for the surface to dry. Then abrade the surface with 220 grit sandpaper on a buffing floor machine to allow the second coat to bond. (Second coat will not adhere to first coat unless the surface is abraded by sanding) Clean floor of dust and reapply.

DRY TIME

Drying Time (@, 77 F, 50% RH):

Drying time is Temperature, humidity and film thickness dependent.

(The higher the humidity the faster the dry time)

Touch: 2-3 hours

Through: 3-5 hours

Walk on: 8 to 12 hours

Full Cure: 7 Days

INTERRUPTION OF WORK

It is advisable to stop application on an expansion joint or any other obvious marker so the applicator can begin where the application had previously ceased. If an area becomes damaged, re-abrade the area using 220 grit sandpaper on a floor machine and re-apply over the area. Prevent any traffic on the area for a minimum of 8 hours. Keep moisture off of repaired area and allow curing for 7 full days.

CLEAN UP

Clean tools and flush equipment with acetone thoroughly before product dries. Once product is dry solvents will not clean the product off.

CAUTION

Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection. Fresh air and exhaust should be provided in enclosed work areas. If inhaled, remove affected person to fresh air and call physician immediately if physical difficulties occur. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. Immediately flush eyes with water for 15 minutes after contact and get medical attention. If accidentally swallowed, rinse mouth thoroughly and obtain immediate medical attention. (In enclosed areas make sure to have an observer watching the applicator for any signs of physical distress.)

CARE & MAINTENANCE

Clean with a mop using SoSafe Spray Away Concentrate then rinse with water. On large commercial type floors, a floor machine can be driven over the surface in wash mode only with the SoSafe Spray Away Concentrate as the cleaning agent. A soft, non-abrasive pad may be used to buff the floor for a shiny finish. Wax coating is no longer necessary. If an area becomes damaged, re-abrade the area using 220 grit sandpaper on a floor machine and re-apply over the area. Prevent any traffic on the area for a minimum of 8 hours. Keep moisture off of repaired area and allow curing for 7 full days.







METAL COAT

SAFETY DATA SHEET

DATE OF PREPARATION

July 12, 2014

SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT NUMBER

T2G---MC

PRODUCT NAME

SDS-Bionic Metal Coat

Regulatory Information Medical

Emergency 800-424-8802

Transportation Emergency* 911

*for Chemical Emergency ONLY (s 800-424-9300 pill, leak, fire, exposure,

or accident)

SECTION 2 – HAZARDS IDENTIFICATION

NFPA Est.	HMIS Est.
Health: 2	Health: 2
Fire: 3	Fire: 3
React: 1	React: 1
Personal Protection	С

Flammable Irritant





ROUTES OF EXPOSURE

INHALATION of vapor or spray mist EYE or SKIN contact with the product, vapor, or spay mist

EFFECTS OF OVEREXPOSURE EYES: irritation, redness SKIN: irritation, redness INHALATION:

headaches or dizziness

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	C.A.S. Number	Concentration
Polymer A-1	Proprietary	10-12
Polymer A-2	Proprietary	6-8
Ethyl Alcohol t-	64-17-5	6-8
Butyl Acetate	540-88-5	54-56
Resin	Proprietary	16-18

SECTION 4 - FIRST AID MEASURES

Eyes: Check for and remove any contact lens. Immediately flush eyes with plenty of water for at least 15 minutes lifting eyelids occasionally. Get medical attention.

Skin: In case of skin contact, wash thoroughly with water or soap and water if available. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation: Remove affected person to fresh air. Seek immediate medical attention if breathing difficulties occur. Also keep patient half sitting with upper body raised.

Ingestion: If accidentally swallowed, rinse mouth thoroughly with water and, afterwards, drink plenty of water. In case of discomfort, obtain medical attention. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel.

SECTION 5 – FIREFIGHTING MEASURES

FLASH POINT:	LEL	UEL	FLAMABILITY
<25C (77 F)	NA	NA	CLASSIFICATION RED LABEL Flammable,
			Flash below 100 °F (38 °C)

EXSTINGUISHING MEDIA

Dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors. Do not release runoff from fire to drains or watercourses.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Closed containers may explode when exposed to extreme heat. This material may produce a floating fire hazard sensitive to static discharge.

SPECIAL FIRE FIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Dike area to prevent spreading. Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not flush to sewer! Dispose of as a chemical waste in accordance with current local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

DOT STORAGE CLASS: class 3

PROPER DOT SHIPPING NAME: Coating Solution

HANDLING: Provide good ventilation or extraction. Avoid prolonged or repeated breathing of vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flames and other sources of ignition. Wash hands thoroughly after handling.

STORAGE: Avoid storage over 100° F, contamination with incompatible materials. Keep containers tightly closed in a cool, well ventilated place. Protect from moisture. Avoid all sources of ignition. Residual vapors might explode on ignition. Do not apply heat, cut, drill, and grind or weld on or near this container. Keep container closed when not in use.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

VENTILATION SYSTEM

Positive fresh air exhaust should be provided in the work area. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. **SKIN PROTECTION**

Avoid skin contact. Wear butyl-rubber gloves and impervious protective clothing. **EYE PROTECTION**

Do not wear contact lenses. Chemical safety goggles or splash shields are recommended.

Ingredient ACGIH TLV OSHA PEL Ethyl Alcohol 1000 ppm

1000 ppm t-Butyl Acetate 200 ppm 200 ppm

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: NA @ 20° C
VAPOR DENSITY: Heavier than air SPECFIC
GRAVITY: 1.02
BOILING POINT: >90°C

SOLUBILITY IN WATER: Insoluble

APPEARANCE: Clear to Amber slightly milky liquid

ODOR: Mild fruity

VOLATILE ORGANIC COMPOUNDS: <100 g/I

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen. INCOMPATABILITIES: oxidizers, alkalis, acids, aliphatic amines, nitrates, water

HAZARDOUS POLYMERIZATION: may occur

SECTION 11 – TOXICOLOGICAL INFORMATION					
ngredient Target Organs		IARC CATEGORY			
Polymer A-1	IRR, LIV, KID	NO			
Polymer A-2	IRR, LIV, KID	NO			
Ethyl Alcohol	HEART, IRR, LIV, KID	NO			
t-Butyl Acetate	IRR	NO			
Resin	NONE	NO			

ABBREVIATIONS:

IRR = Irritant LIV = Liver KID = Kidney

Toxicity to Animals

Oral LD 50

Ethyl alcohol 2000 mg/kg rabbit

Dermal LD 50

Ethyl Alcohol 20,000 mg/kg rabbit

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 – TRANSPORT INFORMATION

DOT and IATAHazard Classification: Class 3 Flammable Liquid

Proper DOT Shipping Name: Coatings Solution

Identification Number: DOT – UN 1139 IATA– UN 1139

SECTION 15 - REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION CAS number Chemical Compound

64-17-5 Ethyl Alcohol

540-88-5 t-Butyl Acetate

CALIFORNIA PROPOSITION 65

This product does not contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

SECTION 16 – OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

IMPORTANT LIABILITY DISCLAIMER

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct as it was obtained from sources we believe are reliable. However, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.

LABEL



PRODUCTS





METAL COAT

DATA SHEET

SDS BIONIC METAL COAT

DESCRIPTION

SDS Bionic Metal Coat is a quartz coating for all metal surfaces. SDS Bionic Metal Coat is peel and flake resistant and designed to protect metal surfaces from normal destructive forces, providing a long lasting barrier that provides superior resistance to rust, moisture, corrosion, salt spray, acid rain, UV damage, oxidation, galvanic corrosion, animal & bird waste damage, graffiti and reduces ice adhesion.

SURFACE

Iron, steel, stainless steel, aluminum, galvanized steel, copper and bronze, powder coated metals, and painted and primed metals.

SOLUTION

Moisture, corrosion, rust, oxidation, galvanic corrosion, wind drag, dirt build up, ice buildup and animal and bird waste damage.

CHARACTERISTICS

Color: Clear to slight amber to rose (depending on temp and humidity) always dries clear. Also available with one of 20 translucent color stains.

Finish: Gloss, and Satin.

Vehicle Type: Solvent Base

Flash Point: (C Penskey-Martens closed cup) 25°C/77°F

VOC: less than 100 g/ltr

Weight per Gallon: 7.36 lb/gallon

Non-breathable

TESTING

ASTM D-1654-08 Accelerated Weathering Exposure, 1000 hours: 10 out of 10

ASTM D-5894-10 Cyclic Salt Fog UV Exposure of Painted Metals, 1000 hours: 10 out of 10

ASTM D-714-02 (09) Blistering of Paints. 1000 hours: 10 out of 10

ASTM D-610-08 Rusting on Painted Steel Surfaces, 1000 hours: 10 out of 10.

ASTM D-3363 Film Hardness Taber, 39.11 average

ASTM D-2803-03 Procedure B (ISO 4623) Corrosion and Filiform. No Filiform or Corrosion 1,000 hours.

*Always obtain independent retest of the static coefficient after applying any coating on walking surface to verify new application meets OSHA requirements.

SPREAD RATE

Recommended Spread Rate:

Wet mils: 2.0-2.5

Dry mils: 0.7-1.75

COVERAGE

Coverage: 640-800 sq ft. /gal (approximate) Coverage will vary depending on the porosity and texture of the substrate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material using SoSafe Spray Away pH Boosted for unpainted surfaces or SoSafe Spray Away Concentrate on painted metal. To remove scale use a scale remover and for light to medium rust use SoSafe Metal Bright. Heavy rust must be sandblasted or ground off.

New Iron & Steel

The entire surface must be cleaned of any rust, scale, oil, and grease. On hot rolled steel, make certain to sandblast or grind off 100% of the slag from that process, as the surface tension of the coating can pull the slag off, causing delamination of the coating. To ensure the surface is free of oil and grease, use a white rag with either acetone or SoSafe Spray Away cleaner and wipe the surface. If the rag remains white, your surface is clean. If the rag turns dark, continue cleaning until it remains white. Prime the bare metal with a quality rust and corrosion primer per the manufacturer's instructions. After primer has dried per the manufacturer's instructions, apply 1 coat of Metal Coat per application instructions. Important - make sure when applying over primers that the re-application time set by the primer's manufacturer is followed, as the Metal Coat needs to anchor. If re-application window has passed, you must mechanically abrade the surface by sanding with a minimum of 220 grit sandpaper to achieve an anchor system for the Metal Coat. IMPORTANT: SDS-Bionic Metal Coat should be used over a primer on ferrous metals. In cases when applying over steel or iron that has no primer, you must apply two coats of SDS-Bionic Metal Coat wet over tack, no more than 15 minutes apart. This will fill micro holes that can rust if not coated properly.

Old Iron & Steel with existing primer or paint

Inspect the condition of the primer and paint to ensure it is sound and free of peeling or chips and that there is good adhesion. Sand blast to a minimum Commercial Blast Clean SSPC-SP-6 method or abrade off any existing pealing paints until you reach a solid base or repair by sanding with 220 grit sandpaper or lower, then re-paint as needed. Once repainted areas are dry and cured, wipe surface with SoSafe Spray Away Concentrate for painted surfaces, then wipe down with a damp rag with fresh water to prevent removal of the existing paint. Once surface is clean and dry, Metal Coat can be applied. Only apply one coat.

Aluminum, Copper, Brass, Bronze, & Stainless Steel

Clean the entire surface of any oil and grease using SoSafe Spray Away pH Boosted for unpainted surfaces. Rinse with fresh water and dry. The surface must be free of any oil or grease in order to form a good bond. To ensure the surface is free of oil and grease, use a white rag with acetone or SoSafe Spray Away pH Boosted for unpainted surfaces and wipe the surface. If the rag remains white the surface is clean; if the rag turns dark, continue cleaning until it remains white. Once clean, SDS Bionic Metal Coat can be applied per application instructions. Only apply one coat.

Galvanized Steel

Clean off all oil, grease, and dirt with SoSafe Spray Away pH Boosted for unpainted surfaces. Rinse with fresh water and dry. To ensure the surface is free of oil and grease, use a white rag with acetone or SoSafe Spray Away pH Boosted for unpainted surfaces and wipe the surface. If the rag remains white the surface is clean. If the rag turns dark, continue cleaning until it remains white. Once clean, Metal Coat can be applied per application instructions. Only apply one coat.

Powder Coated Metals

Inspect the surface to ensure there are no breaches in the powder coating. If any appear, make certain to have them recoated or primed with a matching paint to touch up. Clean the entire surface of any dirt, oil or grease using SoSafe Spray Away Concentrate for painted surfaces. Rinse with fresh water and dry. Do not use solvent as it will damage the powder coating. Once the surface is clean and dry, SDS Bionic Metal Coat can be applied per application instructions. Only apply one coat. (Always do a test area on powder coated surfaces as some types need a profile for proper bonding.)

APPLICATION INSTRUCTION

Test Area

Due to the wide variety of metals and the various methods of application and environments, always test SDS Bionic Metal Coat in an inconspicuous location to ensure adhesion and determine that the desired look is achieved. There will be a slight enhancement in appearance from the original surface, which will vary based on gloss, satin, or matte finishes available. Important – SDS Bionic Metal Coat is clear but on some white paints or white powder coats, color may be altered to appear off-white or slightly yellow once the coating applied, so always do a small test on white surfaces in an inconspicuous spot to determine if any possible color change is acceptable.

Application

SDS Bionic Metal Coat, as with most final finishes is best sprayed on to achieve optimum finish and appearance. With all methods of application, always mask off any adjacent surfaces to keep them free of drips or accidental coating. SDS Bionic Metal Coat should be sprayed. However, if the project configuration and location don't allow for spraying, you can as an alternative. Brush using a fine Chinese bristle brush or roll on with a high-density, ultra-smooth foam roller or dip. This type of alternate application will not yield the same spread coverage and will not typically give you the optimum smooth finish as spraying would. If applying outdoors, make certain the ambient temperature is between 45°F and 105°F, and RH is under 90%. Make certain that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional return of morning dew to make the surface damp again before it has had a chance to dry for at least 5 hours.

Spraying

Stir the contents thoroughly to re-suspend the nano particles that have settled to the bottom. (You should feel a thick layer of sediment with your stir stick in the bottom of the container. This all has to be re-suspended in the liquid to ensure performance of the coating).

Make certain to re-stir every 15-20 minutes to resuspend the settling nano particles during the application process to ensure proper performance of the coating. When surface preparation is complete and surface is dry and free of dust, begin application using a high volume, low pressure (HVLP) spray gun with a 1.0-1.3 size tip and the pressure set at approximately 25 to 30 psi. On a separate piece of cardboard, first spray a test pattern to achieve a 8"to 10" elongated pattern approximately 1½" wide in the middle and fluid enough to cover but not puddle. If there is high wind, this will affect the quality of the finish, as blowing wind can disrupt the spray pattern from your HVLP. It can also contribute to contamination of the finish from blowing dust. It may be necessary to erect a windscreen to protect the area. Once the spray pattern is achieved on the test cardboard, spray one coat in a cross-pattern; left to right, then up and down. This will provide sufficient coverage and will help prevent holes in coverage. (Exception for one coat is on unpainted steel or iron, which requires 2 coats wet on tack) Desired wet film thickness (WFT) is approximately 2.0 to 2.5 mils. To spray small pieces or tight locations, you can use a "Preval" sprayer. This is a small disposable sprayer that can spray any liquid and holds approximately 6 oz, which is ideal for touch ups as well. Available in the paint department of major home improvement stores, or major paint store chains.

CAUTION: If using spray application method in an enclosed space, make certain to tent off the area being sprayed with plastic tarps to avoid spray dust from traveling and contaminating other surfaces with over spray dust. Tented and enclosed areas always require to be positively supplied with fresh air and have ventilated exhaust to outside using fans. Never spray near any open flame or any possible source of ignition such as pilot light, or anything that may spark, as this may cause ignition and explosion of the fumes and vapors. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.)

Rolling

Make certain the surface is clean per preparation instructions. Stir the contents thoroughly to re-suspend the nano particles that have settled to the bottom. (You should feel a thick layer of sediment with your stir stick in the bottom of the container. This all has to be re-suspended into the liquid to ensure performance of the coating). Make certain to re-stir every 15-20 minutes during the application process to re-suspend the settling nano particles. Using a white, ultra smooth high-density foam roller (available at most major home improvement stores), pour the SDS Bionic Metal Coat into a roller pan and completely saturate the roller. Apply in a cross-pattern; left to right, then up and down as quickly as possible, since the coating dries fast. It also gives a better looking finish if you avoid down pressure on the roller. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.)

Brushing

Make certain the surface is clean per preparation instructions. Stir the contents thoroughly to re-suspend the nano particles that have settled to the bottom. Make certain to re-stir every 15-20 minutes during the application process to re-suspend the settling nano particles. Select the appropriate size brush width based on the surface area being coated. Using only a good quality China bristle brush, apply SDS Bionic Metal Coat in a cross-pattern; up and down, then left and right. To obtain the best results, do not overwork the coating, as it dries fairly quickly. Do not bear down with the brush. Use light strokes using the tip of the brush to smooth out the coating. Desired wet film thickness (WFT) is approximately 2.0 to 2.5 mils. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.)

Dipping

Make certain the surface is clean per preparation instructions. Stir the contents regularly to re-suspend the nano particles that have settled to the bottom. Make sure to apply a blanket of nitrogen gas over the coating in the tank to prevent flashing of the solvents and evaporation of the product. Dip the pieces and agitate back and forth and up and down, and remove to dry rack. Make certain to re-stir every 15-20 minutes during the application process to re-suspend the settling nano particles. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.)

Staining Metal Finish

SDS Bionic Metal Stain can be added to your application process by adding 8 oz of stain (various colors available) to 1 gallon of SDS Bionic Metal Coat and mix together well. Spraying is best using the same method described under the "SPRAYING" section. You need to spray very thin fog like coats, wet on wet until desired look is achieved. This may require 3-5 coats, 5 minutes apart to get the coverage and look. Do not apply only one thick coat as it will not flow out and most likely will puddle up or fish eye with the stain added. After the look is achieved and the coating has tacked up, apply one thin clear coat of the SDS Bionic Metal Coat in the desired gloss. If the stained coats have dried before you coat with the clear, wait 24 hours, lightly abrade with 220 grit sandpaper, tack cloth any dust off, and then apply the clear and final coat. The stained color chart is a representation only and is over brushed aluminum. It only represents the general look over that substrate. This is a stain and not a solid pigment like paint. Every substrate will reveal a different final color, which will vary from the color stain chart. Methods and applicators will also vary the color. Always do a test on the actual substrate before doing an entire application to make certain the color is acceptable.

DRY TIME

Drying Time (@, 77 F, 50% RH):

Drying time is Temperature, humidity and film thickness dependent. (The higher the humidity the faster the dry time)

Touch: 2-3 hours

Through: 3-5 hours

Full Cure: 7 Days

INTERRUPTION OF WORK

Upon drying, treated surfaces may appear similar to untreated surfaces. It is possible areas could remain untreated if work is interrupted. It is advisable to stop application on a corner joint or any other obvious marker so the applicator can begin where the application had previously ceased. When re-starting, if you find the last edge you stopped at is dry, it must be sanded to 220 grit to allow the beginning of the lap joint of the coating to anchor.

CLEAN UP

Clean tools and flush equipment immediately after application is completed with acetone thoroughly before product dries. (Important - once coating is dry the tools will not clean up with acetone or any other solvent.)

CAUTION

Always wear OSHA approved 1910.134 and ANSI Z88 2 Respiratory protection. Fresh air and exhaust are required in the work area. If inhaled, remove affected person to fresh air. Call physician immediately if physical difficulties occur. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. Immediately flush eyes with water for 15 minutes after contact and get medical attention. If accidentally swallowed, rinse mouth thoroughly and obtain immediate medical attention. (In enclosed areas make sure to have an observer watching the applicator for any signs of physical distress.)

CARE & MAINTENANCE

To remove graffiti use SoSafe Graffiti Remover Red. For normal cleaning, simply clean by washing the surface with a hose or wiping down with a damp rag to remove most dirt and spills on the surface. Although SDS Bionic Metal Coat is scratch resistant, it is not scratchproof. Do not use abrasive cleansers or abrasive scouring pads. If an area gets damaged or is mechanically abraded, simply lightly sand the area with 220 grit sandpaper and reapply SDS Bionic Metal Coat. If the substrate is damaged at the same time, make the necessary repairs first, and then re-apply SDS Bionic Metal Coat.

Limited 10 Year Warranty

SDS Products guarantees SDS Bionic Metal Coat to be defect free and any material that is proven to be defective will be replaced in a like quantity by the manufacturer within I0 years of date of purchase with proof of purchase, and provided it has been applied according to the instructions on container and data sheet along with other related guidelines posted at covalmolecular.com. This warranty only extends to the owner of the property upon which the product is applied and is non-transferable. This warranty does not cover wear and tear. This warranty is for manufactures defects only. Any warranty claim must be made in writing and sent to seller with supporting materials and access to the property for inspection and testing as requested by seller. Seller will thereafter provide 100% replacement product for product found to be defective for the first 3 years then the product replacement will be prorated every year until year 10. This warranty is given in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The remedy stated herein is an exclusive remedy and Seller shall not be responsible for any other damages, including labor or any incidental, consequential, special or punitive damages, whether based on breach of express or implied warranty, negligence, strict liability or other legal theory.





APPLICATION

Always wear OSHA approved safety goggles, and gloves. Provide fresh air and exhaust in the work area.

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material using glass cleaner and newspaper.

Due to the wide variety substrates, always test SDS Bionic Glass Coat H2O Hydrophobic in an inconspicuous location to ensure performance and compatibility with the surface.



GLASS COAT HZO HYDROPHOBIC

MATERIAL SAFETY DATA SHEET

DATE OF PREPARATION

January 5, 2013

SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT NAME

SDS Glass Coat H2O Hydrophobic

SECTION 2-COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	C.A.S. Number	Concentration	ACGIH TLV	OSHA PEL
Saline Formulation	Proprietary	5-10	n/a	n/a
Water	7732-18-5	90-95	n/a	n/a

SECTION 3-HAZARDS IDENTIFICATION

POTENTIAL ROUTES OF ENTRY

INHALATION of vapor or spray mist

EYE or SKIN contact with the product, vapor, or spay mist

EFFECTS OF OVEREXPOSURE

This product does not pose any harmful effects when used under normal conditions.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE n/a

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4-FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists. SKIN **CONTACT:** In case of skin contact, wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse.

INHALATION: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

INGESTION: If accidentally swallowed, do not induce vomiting. Give two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SECTION 5-FIRE FIGHTING MEASURES

FLASH POINT: FLAMMABILITY CLASSIFICATION **UEL** LEL N/A

N/A N/A N/A

EXTINGUISHING MEDIA

Use water fog, foam, dry chemical, or CO2

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

SPECIAL FIRE FIGHTING PROCEDURES

None

SECTION 6- ACCIDENTAL RELEASE MEASURES

Absorb spill with inert material (dry sand or earth) then place in a chemical container. Flush area with water to remove trace residue.

SECTION 7- HANDLING AND STORAGE

STORAGE: Store in a cool, dry place.

HANDLING: Containers, even those that have been emptied, can contain product residues. Do not use these containers for storing food or drinking water. Wash hands with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY SYSTEM PROTECTION

Short term harmful effects are not expected from vapor generated at ambient temperatures. Use ventilation as required to control vapor concentrations.

SKIN PROTECTION

Avoid skin contact. Wear normal work clothing. Individuals with sensitive skin conditions should wear gloves, outer clothing or apron, overshoes and a face-shield suitable to potential exposure.

EYE PROTECTION

Avoid getting in eyes. Wear chemical goggles if there is potential contact with eyes. Eye wash fountains and safety showers should be available for emergency use.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: 18 mmHg @ 20° C PRODUCT WEIGHT: 8 lbs/gal g/l

EVAPORATION RATE: VOLATILE VOLUME BY %

VAPOR DENSITY: Not determined SPECIFIC GRAVITY: Heavier than water

BOILING POINT: 100°C SOLUBILITY

IN WATER: Yes

APPEARANCE: milky liquid

ODOR: mild V.O.C.: 0 g/liter

SECTION 10- STABILITY AND REACTIVITY

STABILITY: stable HAZARDOUS POLYMERIZATION: will not occur HAZARDOUS DECOMPOSITION

PRODUCTS: none

SECTION 11- TOXICOLOGICAL INFORMATION

Silane Formulation Water: Non-Toxic

SECTION 12- ECOLOGICAL INFORMATION

ECO-TOXICOLOGICAL INFORMATION: No data available

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

DOT Classification: Not regulated

Proper DOT Shipping Name: Adhesive liquid UN / NA code: Class 55

SECTION 15-REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS Number Chemical Compound % by weight % element

n/a Saline Formulation

7732-18-5 water

CALIFORNIA PROPOSITION 65

WARNING: This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm

TSCA CERTIFICATION

All chemicals in this product are listed or are exempt from listing on the TSCA Inventory.

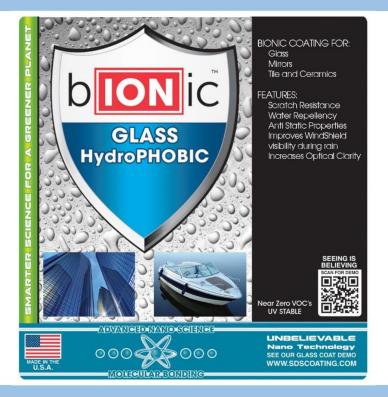
SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

IMPORTANT

LIABILITY DISCLAIMER

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct as it was obtained from sources we believe are reliable. However, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.



PRODUCTS





blonic





SDS BIONIC GLASS COAT H2O HYDROPHOBIC

DESCRIPTION

SDS Bionic Glass Coat H2O Hydrophobic delivers an invisible, durable coating by chemically bonding to surfaces. Once on the surface, depending upon the substrate, it can impart water repellent, antistatic, release, and lubricious properties.

SURFACE

Tub and Tile, All-Purpose, Multi-Surface, Glass, Bowl, Grout, Floor, Pool and Spa, Wheel, Transportation and Vehicle. Safe for use on: Glass, Ceramics, Stainless Steel, Acrylics, Painted Surfaces, Polystyrene, ABS and Polycarbonate. SDS Bionic Glass Coat H2O Hydrophobic should not be used on polished limestone/marble as it may dull the finish.

SOLUTION FOR

• Durable scratch resistant coating

• Imparts water repellency

• Imparts antistatic properties

CHARACTERISTICS

Appearance: colorless to pale yellow

Finish: Clear

Odor: mild

Vehicle Type: Water based

Flash Point: N/A

VOC: 0 g/l

Weight per Gallon: 8 lb/gallon

COVERAGE

800-1000 sq. ft. per gallon

Coverage will vary depending on the porosity and texture of the substrate.

EXPECTED WEAR

6 months to 1 year under normal conditions. Then simply re-apply as needed.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material using a melamine sponge or newspaper and a glass cleaner. Rinse thoroughly with fresh water and allow surface to dry. Rub surface with newspaper. Using Blue Tape mask off your surfaces, also mask off any adjacent areas on other parts you are coating to avoid getting it on surfaces you don't want coated.

APPLICATION INSTRUCTION

Test Area

Due to the wide variety substrates, always test Glass Coat H2O Hydrophobic in an inconspicuous location to ensure performance and compatibility with the surface.

Application

Make certain surface has been prepared properly and is clean and dry. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% RH or less.

Shake the container for several minutes to re-suspend the nano particles that have settled to the bottom. Make certain to re-shake every 15-20 minutes to ensure proper performance. Use a soft lint free, shop quality paper towel to apply. Pour an amount of the coating onto the paper towel to saturate it but not so much it is dripping off. Then wipe a thin coat onto the surface. Rub the coating into the surface. Buff clear with a micro fiber mop.

DRY TIME

Drying Time (@ 77 F, 50% RH): Temperature and humidity dependent.

Touch: 3-5 seconds

Through: 3-5 seconds

Full Cure: 3-5 seconds

CLEAN UP

Clean tools and equipment with water, rinsing thoroughly.

CAUTION

In the event of contact with skin, wash skin thoroughly with soap and water. Always wear safety goggles or splash shield to avoid splashing into your eyes. Do not wear contacts without eye protection. If sealer gets into your eyes immediately flush eyes with water for 15 minutes. If eye irritation occurs after rinsing seek medical attention. If accidentally swallowed, rinse mouth thoroughly with water. In case of discomfort, obtain immediate medical attention.

CARE & MAINTENANCE

To clean coated exterior surfaces simply hose off with a garden hose equipped with a pistol grip sprayer. On interior use a damp towel.





Use spraying or rolling application method. Always mask off any adjacent surfaces to keep them

free of drips or accidental coating.

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PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: SDS BIONIC MARINE AND HULL COAT

Regulatory Information 800-424-8802

Medical Emergency 911

Transportation Emergency* 800-424-9300

*for Chemical Emergency ONLY (spill, leak, fire, exposure or accident)

COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	C.A.S. #	Concentration	ACGIH TLV
Trade Secret A-1	Proprietary	10-12	1000 ppm
Trade Secret A-2	Proprietary	6-8	
Ethyl Alcohol	64-17-5	6-8	1000 ppm
Butyl Acetate	540-88-5	54-56	200 ppm
Trade Secret B	Proprietary	16-18	

CHEMICAL AND PHYSICAL PROPERTIES

Vapor Pressure: 9hPa @ 20° C

Solubility in Water: insoluble **Boiling Point**: $> 90^{\circ}$ C

Odor: Mild and Fruity

Vapor Density: Heavier than air

Specific Gravity: 1.02

Appearance: clear to slightly milky liquid

V.O.C.: 95 gm/liter

NFPA Est.	HMIS Est.
Health: 2	Health: 2
Fire: 3	Fire: 3
React: 1	React: 1

FLAMMABILITY AND EXPLOSIVE PROPERTIES

Flash Point: CLOSED CUP: <25C (77 F)

Recommended Extinguishing Agents: Use water spray, foam, dry chemical or CO2

Hazardous Products Formed by Fire or Thermal decomposition: hazardous fumes (ethanol, phenolics, oxides of

carbon and nitrogen)

Unusual Fire or Explosion Hazards: Flammable Compressed

Gasses: None

Pressure at Room Temp: N/A

REACTIVITY DATA

Stability: stable

Hazardous Polymerization: may occur **Hazardous Decomp. Prod.**: Ethanol

Incompatibility: oxidizers, alkalis, acids, alphatic amines, water

SPILL OR LEAK PROCEDURES

Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with current local, state, and Federal regulations.

STORAGE AND HANDLING PROCEDURES

Storage: avoid storage over 100°F, contamination with incompatible materials. Keep containers tightly closed in a cool, well ventilated place. Protect from moisture. Residual vapors might explode on ignition. Do not apply heat, cut, drill, grind or weld on or near this container.

Handling: provide good ventilation or extraction. Avoid prolonged or repeated breathing of vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flames and other sources of ignition. Wash thoroughly after handling.

SHIPPING REGULATIONS

DOT and IATA Hazard Classification: Class 3 Flammable Liquid

Proper DOT Shipping Name: coatings solution

Identification Number: DOT – UN 1139 IATA – UN 1139

EMERGENCY TREATMENT PROCEDURES

Eye Irritation: immediately flush eyes with plenty of water for at least 15 mins. Get medical attention soon after. Skin Contact: in case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and shoes. Do not use organic solvents for cleanup as the may dry or irritate the skin and act as a carrier for chemical absorption Inhalation: if aerosol or mists are formed, remove affected person to fresh air. Possible discomfort includes irritation of mucous lining (nose, throat, eyes), cough, sneezing and flow of tears. Call physician immediately if breathing difficulties occur: keep patient sitting half way up with upper body raised.

Ingestion: if accidentally swallowed, rinse mouth thoroughly with water and afterwards drink plenty of water. In case of discomfort, obtain medical attention. Notes to physician if substance has been swallowed: early endoscopy in order to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, aspirate leftover substance.

PERSONAL PROTECTION

Respiratory: positive fresh air exhaust should be provided in the work area. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use.

Skin: avoid skin contact. Wear butyl-rubber gloves and impervious protective clothing

Eyes: do not wear contact lenses. Chemical safety goggles or splash shields are recommended.

HEALTH HAZARD DATA

Potential Routes of Entry: skin, eyes, inhalation

Symptoms of Overexposure: possible skin and eye irritation on contact. Inhalation of vapors in an unventilated area may, over time, induce headaches or dizziness.

TOXICOLOGICAL INFORMATION Ingredient Carcinogen **NTP IARC Catagory Target Organs** Trade Secret A-1 IRR, LIV, KID NO NO NO Trade Secret A-2 IRR, LIV, KID NO NO NO Ethyl Alcohol HEART, IRR, LIV, KID NO NO NO **Butyl** Acetate **IRR** NO NO NO Trade Secret B NONE NO NO NO

ABBREVIATIONS

N/A - NOT APPLICABLE

IRR - Irritant

LIV - Liver

ALG - Allergen

KID - Kidney

REP - Reproductive

REGULATORY INFORMATION

SARA Listed Ingredients: Trade Secret A-1, Trade Secret A-2. Trade Secret B TSCA

Inventory: Ethyl Alcohol, Methyl Acetate

STATE RIGHT TO KNOW

CALIFORNIA Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

OTHER REGULATORY INFORMATION: **NONE**

IMPORTANT LIABILITY DISCLAIMER

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct as it was obtained from sources we believe are reliable. However, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.

Label



Products







SDS BIONIC MARINE & HULL COAT

DESCRIPTION

SDS Bionic Marine & Hull Coat is a thin 2 part, clear, and extremely smooth, pesticide and heavy metal free coating of quartz that inhibits the growth of most marine grasses barnacles & mussels from metal ship & boat hulls to provide better fuel economy and reduced cleanings. Works on all ferrous metal hulls, and nonferrous metal underwater running gear such as propellers, rudders, shafts, struts and trim tabs. SDS Bionic Marine & Hull Coat is also a very effective coating for concrete ponds, pipes, and tanks to help prevent liquid seepage through the pours of the concrete. It can reduce the drag in moving liquids through pipe lines thus reducing energy costs. It also inhibits the ability of most marine growth from attaching itself to the surfaces. (Not for use on wood hull boats).

SURFACE

All underwater non-ferrous metals, painted steel hulls, and concrete.

SOLUTION

Corrosion, marine growth, energy efficiency and environmental damage.

CHARACTERISTICS

Color: Clear to slight amber to rose (depending on temp and humidity) always dries clear.

Vehicle Type: Solvent Base

Flash Point: (C Penskey-Martens closed Cup) 25°C/77°F

VOC: less than 100 g/L

Weight per Gallon: 7.36 lb

Non-breathable

TESTING

ASTM D-1654-08 Accelerated Weathering Exposure, 10 out of 10

ASTM D-5894-10 Cyclic Salt Fog UV Exposure of Painted Metals, 10 out of 10

ASTM D-714-02 (09) Blistering of Paints. 10 out of 10

ASTM D-610-08 Rusting on Painted Steel Surfaces, 10 out of 10.

ASTM D-3363 Film Hardness Taper, 39.11 average

ASTM D-2803-03 Procedure B (ISO 4623) Corrosion and Filiform. No Filiform or Corrosion 1,000 hours.

SPREAD RATE

Recommended Spread Rate per coat:

Wet mils: 2.0-3.0

Dry mils: 1.2-1.8

Two coats required over hulls wet on tack application.

COVERAGE

Coverage: 500-800 sq.ft./gal (approximate)

Coverage will vary depending on the porosity and texture of the substrate and application. Most applications require 2 coats, please read this data sheet carefully.

SURFACE PREPARATION

Steel Hulls

Sand blast Commercial Blast Clean SSPC-SP-10 method or abrade off any existing ablative marine paints until you reach a solid base or bare steel.

Repaint the hull with a marine grade primer per the manufacturer's instructions. The SDS Bionic Marine & Hull Coat needs to be applied over the primer during the reapplication or re-coat time frame as recommended by the primer paint manufacturer. If you do not apply the SDS Bionic Marine & Hull Coat during this time frame you must then mechanically abrade the hull to minimum of 220 grit in order to achieve a good anchor to bond, this will prevent coating from delaminating. Then apply two coats of SDS Bionic Marine & Hull Coat directly to the surface wet on tack. Second coat must be applied within 15 minutes while first coat is still tacky. If first coat dries wait 24 hours and sand with a minimum of 220 grit sandpaper in order for second coat to bond. If you don't abrade the second coat will peel off.

Non-Ferrous Metals

For stainless, brass, aluminum, or bronze surfaces, completely clean to bare metal. Then using acetone or SoSafe Spray Away pH Boosted for unpainted surfaces clean the entire surface to remove any contaminates, rinse clean with fresh water and dry. Once dry, then apply two coast of SDS Bionic Marine & Hull Coat directly to the surface wet on tack. Second coat must be applied within 10-15 minutes while first coat is still tacky. If first coat dries wait 24 hours and sand with a minimum of 220 grit sandpaper in order for second coat to bond. If you don't abrade the second coat will peel off.

Propellers

Clean completely by sand blasting, steam washing or high pressure washing to make certain surface is free of any barnacles or other marine growth. Inspect for any damage or fractures and make any necessary repairs. Then clean with acetone or SoSafe Spray Away pH Boosted for unpainted surfaces. Rinse with fresh water and dry completely. Then apply two coats of SDS Bionic Marine & Hull Coat wet on tack. Second coat must be applied within 10-15 minutes while first coat is still tacky. If first coat dries wait 24 hours and sand with a minimum of 220 grit sandpaper in order for second coat to bond. If you don't abrade the second coat will peel off.

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APPLICATION INSTRUCTION

Spray Application for Small to Mid Size Boats.

Spraying is the preferred method of application. Mask off any adjacent surfaces to keep them free of drips or accidental coating. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, RH 90% or less and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried. SDS Bionic Marine & Hull Coat is a two component product consisting of 1:1 SDS Bionic Marine & Hull Coat and SDS Bionic Catalyst. Stir the container well as there will be settlement of the nano particles in the bottom typically '4" will have settled. Stir the contents thoroughly for several minutes to re-suspend the nano particles that have settled to the bottom. Make certain to re-stir at least every 10 to 15minutes during the application process to ensure proper performance of the coating. For small to mid size boats use a high volume low pressure sprayer (HVLP) with a 1.0-1.3 spray tip with air pressure set at 25 to 30 psi. On a piece of cardboard first spray a test pattern, you are looking to adjust your spray gun for an 8-10 "elongated pattern approximately 1 1/2:" wide in the middle. Fluid flow should cover but not puddle. You will be applying two thin coats wet on tack 2-3 WFT each. Spray the coating on in a cross pattern as move down the vessel from top to bottom then right to left keeping a wet edge. You must apply the second coat within 10-15 minutes while the first coat is still tacky, if the vessel is too large for one person to complete the first coat and start the second coat while still tacky, then you will need additional applicators applying the second coat following the first coat applicator within 10-15 minutes behind so as to coat the first coat while still tacky. Allow the SDS Bionic Marine & Hull Coat to cure for 48 hours prior to launch.

Spray Application on Large Yachts & Ships

Spraying is the preferred method of application. SDS Bionic Marine & Hull Coat is a 2 component product requiring PART #B CATALYST. Mask off any adjacent surfaces to keep them free of drips or accidental coating. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, RH 90% or less and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried. On large projects your SDS Bionic Marine & Hull Coat will most likely be in 55 gallon drums or 275 gallon tots. You will need an empty container to hold equal parts of part A and B. You will need to insert a drum or tot agitator into the container to re-suspend the nano particles that have settler to the bottom. Make certain there is no sediment in the bottom of the container or coating will not perform. Keep the agitator going the entire time you are spraying. You will most likely be applying with an air less spray system equipped with a manifold with several spray tips to cover very large areas at once. You will need to install spray tips or adjustable spray heads that can mist the coating on thin at a rate of 2-3 WFT. You will need a crew of enough applicators to keep a wet edge as you go around the ship. You will need a second crew of applicators to follow the first crew approximately 10-15 minutes behind to apply the second coat while the first coat is still tacky. DO NOT ALLOW THE FIRST COAT TO DRY FOR MORE THAN 15 MINUTES OR SECOND COAT WILL NOT ADHERE AND WILL PEEL OFF. AFTER COMPLETION OF COATING DO NOT LAUNCH FOR A FULL 3 DAYS.

Roller Application for Hulls

Mask off those areas that you don't want the coating to contact such as the boot strip. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% or less RH and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional

morning dew to make the surface damp again before it has dried. Stir the container well as there will be settlement of the nano particles in the bottom typically ½" will have settled. Stir the contents thoroughly for several minutes to re-suspend the nano particles that have settled to the bottom. Make certain to re-stir at least every 10 to 15 minutes after mixing part A and B during the application process to re-suspend the nano particles to ensure proper performance. Using a high density ultra smooth foam roller or ½" nap roller apply the coating in an up and down then left to right pattern to ensure complete coverage of the surface. Do not over work the coating to the surface just spread the coating thin and continue on. Make certain to apply coating thin at a rate of 2.0 to 3.0 wet film thicknesses (WFT). Within 10-15 minutes a second coat needs to be rolled on while the first coat is still tacky, this is a wet on tack application. On larger vessels and boats it is necessary to have enough applicators on hand to re-coat while the first coat is still tacky. If the first coat dries the second coat will not bond and it will peel off. In the event the first coat dries too fast and the second coat does not get applied during the tacky period wait 24 hours and abrade the first coat to a minimum of 220 grit in order that the second coat can achieve a mechanical bond to the first coat. Allow coating to cure 48 hours before launching.

CAUTION: If using spray application method in an enclosed space, make certain to tent off the area being sprayed with plastic tarps to avoid spray dust from traveling and contaminating other surfaces with overspray dust. Tented and enclosed areas should always be positively supplied with fresh air and have ventilated exhaust to outside using fans. Never spray near any open source of ignition such as pilot light flames, or anything that may spark, as this may cause ignition and explosion of the fumes and vapors. When spraying outdoors, make certain there will be no rain for at least 5 hours after anticipated completion time. If there is high wind, this will affect the quality of the finish as blowing wind can disrupt the spray pattern from the HVLP sprayer and can contribute to contamination of the finish. It may be necessary to erect a windscreen to protect the area prior to beginning the coating application. (In enclosed areas make sure to have an observer watching the applicator for any signs of physical distress.)

Underwater Hardware

For bronze and stainless propellers, rudders, stabilizers, sea strainers, shafts, and struts do not need to be primed, follow surface preparation instructions for unpainted surfaces, then apply SDS Bionic Marine & Hull Coat directly to the surface following the spray or roller application directions.

Concrete Surfaces:

For concrete ponds, tanks and aqueducts make certain all oil, grease and dirt is removed using SoSafe Spray Away pH Boosted for unpainted surfaces. Then rinse with fresh water and allow to dry. Before SDS Bionic Marine & Hull Coat can be applied, the concrete must be sealed to prevent the coating from absorbing into the surface rendering it non-effective. Once the concrete surface is clean and dries (less than 13% moisture), apply SDS Bionic Quick Seal & Enhance to preseal the surface. Depending on the porosity and condition of the concrete it may take several coats to seal the surface. (See SDS Bionic Quick Seal & Enhance application instructions). SDS Bionic Marine & Hull Coat is best applied by a pump sprayer, SDS Bionic Marine & Hull Coat is a 2 component product requiring PART #B CATALYST. To apply by pump spraying, use a SP or similar acetone/alcohol proof sprayer equipped with a red fan tip on the wand handle. Mask off any adjacent surfaces to keep them free of drips or accidental coating. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% or less RH and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried. Stir the container well as there will be settlement of the nanoparticles in the bottom typically '4" will have settled. Stir contents thoroughly for several minutes to re-suspend the nano particles that have settled to the bottom. Make certain to re-stir at least every 10 to 15 minutes after mixing part A and B during the application process to re-suspend the nano particles to ensure proper performance. Hold the tip of the wand approximately 8" to 10" from the surface and begin spraying in even back and forth up and down pattern to cover the entire surface, do not over apply too thick you are looking for 2.0 to 3.0 wet film thickness (WFT) on a one coat application. Let coating dry and cure for 48 hours before emersion.

Rolling on Concrete Surfaces:

For rolling the surface of concrete ponds, tanks and aqueducts make certain all oil grease and dirt are removed from the pores and surface of the concrete by using SoSafe Spray Away pH Boosted for unpainted surfaces. Then rinse with fresh water and allow to dry. Before SDS Bionic Marine & Hull Coat can be applied, the concrete must be sealed to prevent the coating from absorbing into the surface rendering it non-effective. Once the concrete surface is clean and dry (less than 13% moisture), apply SDS Bionic Quick Seal & Enhance to pre-seal the surface. Depending on the porosity and condition of the concrete it may take several coats to seal the surface. (See SDS Bionic Quick Seal & Enhance application instructions). Mask off any adjacent surfaces to keep them free of drips or accidental coating. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% or less RH and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried. Stir the container well as there will be settlement of the nano particles in the bottom typically 1/4" will have settled. Stir the contents thoroughly for several minutes to re-suspend the nano particles that have settled to the bottom. Make certain to re-stir at least every 10 to 15 minutes after mixing part A and B during the application process to re-suspend the nano particles to ensure proper performance. Using a high density ultra smooth foam roller or a 1/4" nap roller apply the coating in a back and forth and up and down pattern making sure to keep the roller wet with the coating. Do not apply too thick you want a 2.0 to 3.0 wet film thickness (WFT) for best results. Apply only one coat. Allow to cure for 48 hours before emersion.

DRY TIME

Drying Time (@ 77 F, 50% RH): Temperature and humidity dependent.

Touch: 2-3 hours Through: 3-5 hours Walk On: 8-12 hours Full Cure: 7 Days

INTERRUPTION OF WORK

Upon drying, treated surfaces may appear similar to untreated surfaces. If work is interrupted, mark with tape or other marking devise. You will need to abrade approximately 4 inches back over the coating to the edge with 220 grit sandpaper first so the continuation of the coating does not peel. Apply over that 4" abraded area as a lab joint and continue the balance of the coating.

CLEAN UP

Clean tools and flush equipment immediately with acetone thoroughly before product dries. Once coating dries it cannot be cleaned off with solvents.

STORAGE

Store in cool dry location. Do not store solvent based products in sun or in sun heated vehicle as overly heated product can turn dark in color and remain tinted when applied.

CAUTION

Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection. Fresh air and exhaust should be provided in the work area. If inhaled, remove affected person to fresh air. Call physician immediately if physical difficulties occur. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. If you get coating in your eyes rinse with fresh water for 15 minutes and seek immediate medical attention. If accidently swallowed rinse mouth with fresh water for 15 minutes and seek immediate medical attention. (In enclosed areas make sure to have an observer watching the applicator for any signs of physical distress.)



Lab & Field Test Results and Product Application SDS BIONIC WORLWIDE

C O N F I D E N T I A L D O C U M E N T

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SDS BIONIC METAL COAT

Standard Test Results

POWDER COATING



Both samples were scribed with an X and exposed to NSS for 23 hours and were placed in humidity cabinets set @40°C and 80% RH for 6 weeks

SDS-BIONIC METAL COAT

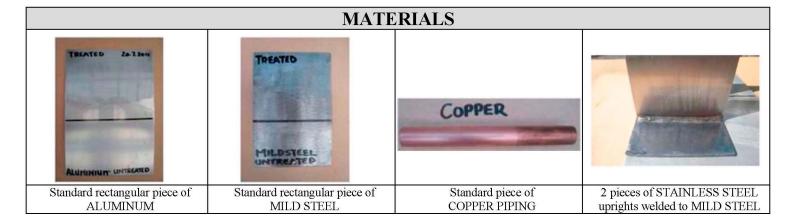


Test	Result
ASTM D-3359-09 Adhesion Standard Test	300 Hours 4B
ASTM D-3363 Film Hardness Taper	39.11 Average
*ASTM D-2047 Static Coefficient *Always obtain independent retest of the static coefficient after applying any coating on walking surface to verify new application meets OSHA requirements.	Passes ADA Requirements*
ASTM D-2803-03 Procedure B (ISO 4623) Corrosion and Filiform.	No Filiform or Corrosion 1,000 Hours.
E96-10 Water Vapor Transmission	Average WVT 0.3473 gr/ft ² /hr, Average Perms 0.8376 gr/ft ² /hr
G155 Xenon Arc, Wavelength 340nm Irradiance 1.0 w/m ²	500 Hours, Slight Change
ISO 4623 International Standard Corrosion	No Corrosion
ISO 4628-10, International Standard, Degradation of Coating	No Degradation Coated Over Primer.



SDS BIONIC METAL COAT

1 Month Electrolysis and Corrosion Test



TESTING STEPS:

- 1. Apply SDS Bionic Metal Coat to Materials
- 2. Allow 7 Days Curing Time
- 3. Expose and Subject Materials to the Outside Environment for 30 Days
- 4. Check Progress at 1, 5, 10, and 30 Days

Test Details	Result
July 20 th Scored indoors and after 7 days of curing was permitted to begin the testing. Temperature: Room Temperature Indoor	SDS Bionic Metal Coat applied on July 13 th . 7 day curing period was allowed to maximize results.
July 21 st – Day 1 The assembly has been placed in the environment for 24 hours. Temperature: 13 Degrees Celsius Rain	Aluminum, Metal and Assembly after 1 day of exposure to the environment showing rust occurring and beginnings of electrolysis on the untreated half.
July 25 th – Day 5 The assembly has been placed in the environment for 24 hours. Temperature: 10 Degrees Celsius Rain	Aluminum, Metal and Assembly after 1 day of exposure to the environment continues to show rust and continued electrolysis on the untreated half.
August 1 st – Day 10 The assembly has been placed in the environment for 24 hours. Temperature: 13 Degrees Celsius Sunny	Aluminum, Metal and Assembly after 10 days of exposure to the environment shows the rust truly setting in and where the copper tube is sitting, the aluminum is being eaten away in 2 areas due to electrolysis on the untreated half.
August 20 th – Day 30 The assembly has been placed in the environment for 24 hours. Temperature: 19.4 Degrees Celsius Sunny	Aluminum, Metal and Assembly after 30 days of exposure to the environment shows the rust truly setting in and where the copper tube is sitting, the aluminum is being eaten away in 3 areas due to electrolysis on the untreated half.



DAY 1 - July 21 st , 2011		
STANDARD ALUMINUM	MILD STEEL	MIXED ASSEMBLY
ALUMINIUM UNTREATED	MILDSTEEL UNTREATED	TREATED 20-22011
MIXED ASSEMBLY SDS TREATED	MIXED ASSEMBLY SDS UNTREATED	
116D Zo-Z 2011	NIUM UNTREATED	

Test Details	Result
July 21 st – Day 1 The assembly has been placed in the environment for 24 hours. Temperature: 13 Degrees Celsius Rain	Aluminum, Metal and Assembly after 1 day of exposure to the environment showing rust occurring and beginnings of electrolysis on the untreated half.



DAY 5 - July 25 th , 2011		
STANDARD ALUMINUM	MILD STEEL	MIXED ASSEMBLY
ALUMINIUM UNTREATED	TREATED LINE TERM	ALUMINIUM UNITREATED
MIXED ASSEMBLY SDS TREATED	MIXED ASSEMBLY SDS UNTREATED	
TRENTED 20-2.2011	LUMINIUM UNTREATED	

Test Details	Result
July 25 th – Day 5	Aluminum, Metal and Assembly after 1 day of
The assembly has been placed in the environment for 24 hours.	exposure to the environment continues to show rust
Temperature: 10 Degrees Celsius Rain	and continued electrolysis on the untreated half.



DAY 10 – August 1 st , 2011		
STANDARD ALUMINUM	MILD STEEL	MIXED ASSEMBLY
ALUMINIUM UNTREAMO	TREATER	ALUMINIUM UNTREATED
MIXED ASSEMBLY SDS TREATED	MIXED ASSEMBLY SDS UNTREATED	
TREATED Zo-Z ZOH	LUMINIUM UNTREATED	

Test Details	Result
August 1 st – Day 10 The assembly has been placed in the environment for 24 hours. Temperature: 13 Degrees Celsius Sunny	Aluminum, Metal and Assembly after 10 days of exposure to the environment shows the rust truly setting in and where the copper tube is sitting, the aluminum is being eaten away in 2 areas due to electrolysis on the untreated half.



DAY 30 – August 20 th , 2011			
STANDARD ALUMINUM	MILD STEEL	MIXED ASSEMBLY	
ALUMINIUM UNTREATED	MLD-RES.	ALUMINIUM UNTREATED	
MIXED ASSEMBLY SDS TREATED	MIXED ASSEMBLY SDS UNTREATED		

Test Details	Result
August 20 th – Day 30 The assembly has been placed in the environment for 24 hours. Temperature: 19.4 Degrees Celsius Sunny	Aluminum, Metal and Assembly after 30 days of exposure to the environment shows the rust truly setting in and where the copper tube is sitting, the aluminum is being eaten away in 3 areas due to electrolysis on the untreated half.



SDS BIONIC METAL COAT

3 Minute Coating Combustibility Flame Test

Unpainted Mild Steel







Test Details	Result
Unpainted mild steel coated with SDS-BIONIC Metal Coat was heated with an 1800 degree propane torch for 3 minutes.	While the metal darkened beneath, the Metal Coat coating did not ignite, blister or peal.



SDS BIONIC METAL COAT

SDS-BIONIC Metal Coat Cut without Chipping, Peeling or Flaking

Large Truck Wheel Rim





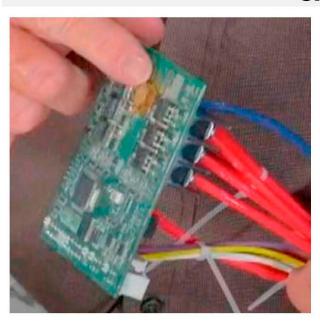
The following photos are of a large truck wheel rim coated with SDS-BIONIC Metal Coat for Alcoa Aluminum. The coating was being tested for protecting their new line of truck rims being manufactured in China. After successfully passing all their tests the test rim was then cut into pie shape samples for others to review the results. The shop doing the cutting was surprised that the coating did not chip, peel or flake after being cut with both band saw and C&C machine. Unlike other coatings both types of cutting had no effect on the SDS-BIONIC Metal Coat edges.	Test Details		Result
NOTE TO COMPANY AND MANUAL AND ADDRESS OF THE ATT A STATE OF THE ATT A	SDS-BIONIC Metal Coat to being tested for protecting manufactured in China.	for Alcoa Aluminum. The coating was their new line of truck rims being	cut into pie shape samples for others to review the results. The shop doing the cutting was surprised that the coating did not chip, peel or flake after being cut with both band saw and C&C machine. Unlike other coatings both types of cutting had no effect on the SDS-BIONIC Metal Coat edges.



SDS BIONIC CIRCUIT COAT

3 Day Salt Water Submersion Test

Circuit Board





Test Details	Result
A 30 amp, 220 volt circuit board, coated with SDS-BIONIC Circuit Coat was submerged while running in salt water.	The circuit remained running and lasted for 3 days, until a breach occurred, ONLY, due to the ground bolt which had not been coated.



SDS BIONIC CIRCUIT COAT

Cell Phone Submersion Test

Circuit Board



Test Details	Result
Cell phone circuitry was coated with SDS-BIONIC Circuit Coat	After time for the coating to cure the phone was reassembled and submerged in water. After removal from the water the phone worked normally.



Deepwater Doppler Equipment Test

Shell Oil's Deepwater Doppler



Test Details Result

British Marine Technology (BMT), a leading international, multi-disciplinary engineering, science and technology consultancy, is handling Doppler technology for Shell Oil. They were having to pull up and clean Shell Oil's Deepwater Doppler equipment at great expense every six months or less because of marine life over growth (as shown in the picture above) preventing clear imaging.

indicating lack of marine growth on the sounding drum. As a result of this test BMT has approved SDS-BIONIC Marine & Hull Coat for all their Dopplers.

After two years it still makes clear images

The Doppler equipment was coated with SDS-BIONIC Marine & Hull Coat and placed at over 900 feet under water in the Gulf of Mexico in 2010.



2 Month Static Plate Marine Growth Test

Steel Plate



Test Details	Result
A SDS-BIONIC Marine & Hull Coat protected steel plate after being submerged for two months	After 2 months the plate can be cleaned with just water from a spray bottle showing that no marine life had attached to the coated surface.



8 Month Static Plate Marine Growth Test

Steel Plate







Test Details	Result
A SDS-BIONIC Marine & Hull Coat protected steel plate after being submerged for eight (8) months	After 8 months the plate can be cleaned with just water from a spray bottle showing that no marine life had attached to the coated surface.





Product ApplicationSDS BIONIC WORLWIDE

CONFIDENTIAL



Ghana Navy Approves PB MK3 Patrol Boat Application

20 meter long ex-US Navy PB MK3



Application Details	Result
The Ghana Navy has a single 20 meter long ex-US Navy PB MK3 inshore patrol craft that was built in the 1970s and transferred to Ghana in 2001.	The Ghana Navy has completed testing SDS-BIONIC Marine & Hull Coat. With positive results, the Ghana Navy has now implemented SDS-BIONIC Marine & Hull Coat for their patrol boats.



SDS BIONIC AUTO REVITALIZER

Tire Application

BEFORE APPLICATION

AFTER APPLICATION





5 MONTHS AFTER APPLICATION



Application Details	Result
Auto Revitalizer was applied to six year old sun faded tires on 11/14/2011. Auto Revitalizer eliminates the need to wash tires, saving fleet maintenance costs, for water, cleaners and labor.	On 3/19/2012, five months later, Auto Revitalizer was still keeping the tires clean even in the snow and muddy roads at Lake Tahoe.



IN-N-OUT BURGER

Application

IN-N-OUT BURGER





Application Details

IN-N-OUT Burger has completed a test location using SDS BIONIC Multi-Purpose Sealer and SDS BIONIC Concrete Coat to protect various surfaces inside and outside the building.

Management has their own in house cleaning crew which was excited that the coatings eliminated the need for power washing and the surfaces look cleaner than they ever have.

Result

They have now completed application of SDS BIONIC Products in three locations and approved SDS BIONIC Products for all 150 of their existing restaurants as well as planning to use them for the average 8 new locations they open each year!



CALTRANS PROJECTS

Application

CALTRANS







LETTER FROM CALTRANS PRESIDENT - MIKE HOPWOOD

Friday, March 30, 2012 7:46 AM To: Rick Stenberg Subject: CalTrans Projects

Dear SDS BIONIC,

In response to your inquire with regards to the approved Cal- trans business, we have several ongoing projects in review and two that have been approved. We are currently in the process of the getting all the products approved by the state to go into the general purchasing listings of approved prod- ucts. Part of this process was the signing of an NDA which limits the ability of the state and us to disclose information without prior approval. However, I can give you information on the two projects we have been approved for.

District 10 and District 4 Road Signs

Each district has its own buying regulations. District 10 has approved the use of the SDS-BIONIC Graffiti Coat to be used on all the signage in the district. We have just finished the delivery of the first 180+ signs. More signs will be contracted to be coated through our approved partner in District 10. The District has gone through all the testing of the product and has written their approval letter for using the coating on the signs. This letter was to be used strictly for internal use as Caltrans has strict standards for public announcements related to Caltrans products. Hence the NDA. I personally have the signed letter from the Manager in charge of the Signs Department. If you would like a copy of this letter for you own files I can send it to you with the understanding that it is not to be made public.

Tunnels and Tubes

We have been approved as the preferred coating on the Devil's Slide Tunnel Project as a protective coating for the concrete, paint covered concrete and metal. The Director in Charge of Tunnels and Tubes is in the process of making the required specification changes now. The decision to move to the nano coating was made after extensive testing and outperforming the competition that was originally specified. We should have final confirmation on the completion of the spec change as soon as it happens.

Regards,

Mike Hopwood President

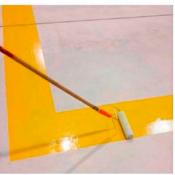


DYESS AIR FORCE BASE, ABILENE, TEXAS

Application

AIRPORT HANGER







Application Details

Completed April 21st 2012, SDS BIONIC Concrete Coat was Applied on painted surfaces at Dyess Air Force Base. The majority of the project was top coating yellow and black diagonal caution striping inside and outside of both hangar doors. There is over 6,000 sq. ft. of striping installed. This hangar had two identical halves used to maintain three Air Force planes: C130H, C130J, and B1b. All painted surfaces were coated with Concrete Coat.

Caution stripes were installed outside with an airless striping sprayer and then top coated with SDS BIONIC Concrete Coat the next day using a pump-up sprayer.

Result

The painted surfaces now treated with SDS BIONIC Concrete Coat will resist oils and staining. The floor will be easy to clean, maintain, and they will last many years longer than ordinary paints as well as resisting stains better than epoxy or polyurethane.

The coated surfaces had paint spilled on them after installation and we could wipe it off with Xylene or Acetone with complete removal and no loss in gloss.



GOLDEN GATE BRIDGE, SAN FRANCISCO, CALIFORNIA Application

BRIDGE & COMMON AREA













GOLDEN GATE BRIDGE, SAN FRANCISCO, CALIFORNIA Application (cont.)



Application Details

next day using a pump-up sprayer.

The Golden Gate Bridge concrete cable and tower footings show signs of deterioration, becoming more porous and allowing the metal rebar to rust and corrode. SDS BIONIC Multi-Purpose Sealer will be used to protect these surfaces. They are also planning to use it to protect the historic civil war Fort Point under the bridge. Caution stripes were installed outside with an airless striping sprayer and then top coated with SDS BIONIC Concrete Coat the

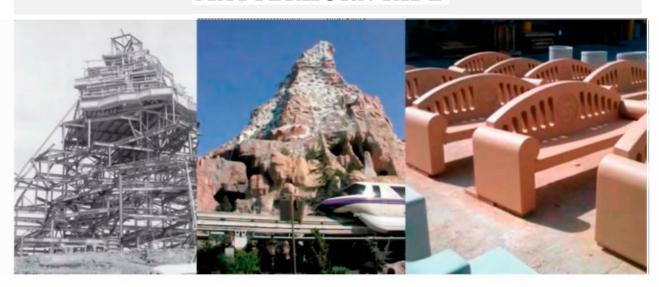
Result

May 28th, 2012 was the 75th Anniversary of the Golden Gate Bridge. The Golden Gate Bridge District actively prepared for this event with the construction of a new visitor center and a renovation of existing buildings and walkways. SDS BIONIC Multi Surface Sealer was used on sidewalks and benches. SDS-BIONIC Metal Coat was applied to protect the interactive bridge model displays as well as the 27 ton display of a cross section of the cable used on the bridge pictured to the right. SDS BIONIC Concrete Coat



DISNEYLAND *Application*

MATTERHORN RIDE



Application Details

The Matterhorn ride at Disneyland has a steel structure that gets epoxy coated two times a year to prevent corrosion. SDS BIONIC Metal Coat was applied in May of 2011 on a portion of the structure as a test. The coated steel has now passed all their testing, showing no signs of rust or corrosion in 11 months.

Result

They are proceeding with application on the entire structure. The success of SDS BIONIC Metal Coat on the Matterhorn has led to planned use in many other areas of the park including the monorail.

SDS BIONIC Metal Coat will protect it from corrosion, keep it clean and help keep the paint from oxidizing. This success is leading to use of SDS BIONIC products at Disneyland Resorts around the world.



RIO GRANDE GORGE BRIDGE

Application

3,600 BRIDGES THROUGHOUT NEW MEXICO



Application Details

The Rio Grande Gorge Bridge is a cantilever truss bridge over the Rio Grande, in New Mexico, 650 feet below. It was completed in 1965 and was once named Most Beautiful Steel Bridge in the Long Span category by the American Institute of Steel Construction.

Result

The New Mexico Department of Transportation completed a year of evaluating tests and has approved SDS BIONIC Metal Coat and SDS BIONIC Multi-Purpose Sealer for use on a portion of the famous Rio Grande Gorge Bridge and applied in May of 2012.





SDS BIONIC WORLWIDE

CONFIDENTIAL



THANK YOU FOR CHOOSING SDS-BIONIC







ABOUT THE COMPANY

SDS-Bionic Products offers coatings and sealers with very low to zero Volatile Organic Compounds (VOCs) and contain no known carcinogens - posing no danger to plants or animals.

This does not affect their performance - they are long-lasting and are easy to clean so maintenance costs are reduced and the life of material extended.



