



SHERWIN-WILLIAMS
Chemical Coatings

TECHNICAL INFORMATION

POWDURA® HYBRID POWDER COATING

CHEMICAL COATINGS

PRODUCT DESCRIPTION

HDS4-20000 BRONZE

POWDURA® Hybrid Powder Coating is recommended for a broad range of interior functional and decorative applications.

Performance Tests:

Adhesion:

(ASTM D-3359) No failure with 1/16 " Squares

Flexibility:

(ASTM D-522) Pass 1/4 " Mandrel Bend

Pencil Hardness:

(ASTM D-3363) 2H

Impact Resistance:

(ASTM D-2794) 120 Dir / 100 Rev

CHARACTERISTICS

60° Gloss: 30-40

Cure Schedule: 10 min. at 4005°F

Film Thickness Range: 2.0-3.0 mils

Specific Gravity: 1.590 ± .05

Coverage at 1.0 Mil 120.9 sq. ft./ lb

Typical Environmental Properties: On Bonderite 1000 Panels

Salt Fog 1000 hours
(ASTM B-117)

Humidity 1000 hours
(ASTM D-4585)

Storage:

Powdura® Hybrid Powder Coatings should be kept in a dry and cool area at temperatures below 75°F (24° C). ~~Shelf life ranges from 6 months to 2 years.~~ When not in use, store powder in sealed containers: fine powders are hygroscopic.

SPECIFICATIONS

General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface preparation treatments to ensure optimum adhesion and coating performance properties. The use of a chemical conversion coating prior to the application of a powder coating is strongly recommended. Consult Metal Preparation Brochure CC-T1 for additional details.

Aluminum: A minimum of a 5-stage chrome phosphate metal treatment, or equivalent, is required for good adhesion and optimum coating performance properties.

Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full-scale application. The properties listed are typical and should not be construed as the actual specification.

Product Limitations:

- For interior applications only.
- Contact your Sherwin-Williams Representative where use of this product at higher than recommended film thickness may be required.

APPLICATION

Powder coatings must be applied using suitable electrostatic equipment. Consult your Sherwin-Williams Representative regarding unique applications.

CAUTIONS

Thoroughly review product label for safety and cautions prior to using this product. Please direct any questions or comments to your local Sherwin-Williams facility.

CAUTION! Causes eye irritation, causes skin irritation, may cause allergic skin reaction, respiratory irritant, dust may cause eye and respiratory irritation, dust may form an explosive mixture in air. Avoid breathing dust. Avoid contact with eyes and prolonged or repeated contact with skin. Use protective clothing and NIOSH approved respirator. Do not use near sparks or open flame or any type of ignition source. Wash thoroughly after handling. Use only with adequate ventilation.

FIRST AID:

If on SKIN: Wash thoroughly with soap and water.

If in EYES: Flush with water immediately and procure medical attention. The area adjacent to the coating operation should be properly ventilated. Cure ovens must be exhausted to the outside atmosphere. All dusts are respiratory irritants, inhalation of the dust should be avoided. To avoid static electricity build-up, properly ground all equipment. Provide dust collection equipment with adequate explosion venting; dust clouds of any finely divided organic material can be ignited by open flame or electrical sparks.

DO NOT TAKE INTERNALLY.

KEEP OUT OF REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY.

REFER TO MATERIAL SAFETY DATA SHEET FOR ADDITIONAL INFORMATION.

Note:

Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating and opinions stated above pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties or guaranties as to the end results.

Rockford, IL
June 9, 2008

MATERIAL SAFETY DATA SHEET

HDS4-20000

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Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

~~HDS4-20000~~

HMIS CODES

Health 1
Flammability 1
Reactivity 0

PRODUCT NAME

~~POWDURAO Hybrid Powder Coating, BRONZE~~

MANUFACTURER'S NAME

~~THE SHERWIN-WILLIAMS COMPANY~~

101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION

22-MAR-05

INFORMATION TELEPHONE NO.
(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
23	7727-43-7	Barium Sulfate		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of dust.

EYE or SKIN contact with the product or dust.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

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Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT

Not Applicable

LEL

N.A.

UEL

N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Dust at sufficient concentrations can form explosive mixtures with air.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

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Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition.

Sweep up material taking care not to generate airborne dust.

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Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Store in a cool, dry area out of direct sunlight.

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.

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Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid eye and prolonged skin contact. Avoid generating or breathing airborne dust.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

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RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

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Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.16 lb/gal	1577 g/l
SPECIFIC GRAVITY	1.58	
BOILING POINT	Not Applicable	
MELTING POINT	Not Available	
VOLATILE VOLUME	0 %	
EVAPORATION RATE	N.A.	
VAPOR DENSITY	N.A.	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)		
0.00 lb/gal 0 g/l	Less Water and Federally Exempt Solvents	
0.00 lb/gal 0 g/l	Emitted VOC	

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Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

High concentrations of airborne dust which may ignite explosively.

INCOMPATIBILITY

Strong oxidizers, acids or alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

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Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

CAS No. Ingredient Name

7727-43-7	Barium Sulfate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

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Section 12 -- ECOLOGICAL INFORMATION
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ECOTOXICOLOGICAL INFORMATION

No data available.

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Section 13 -- DISPOSAL CONSIDERATIONS
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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.

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Section 14 -- TRANSPORT INFORMATION
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No data available.

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Section 15 -- REGULATORY INFORMATION
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SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

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

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Section 16 -- OTHER INFORMATION
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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.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.