

Avian-B Coating **Safety Data Sheets**

Avian-B coating pre-mix is a concentrate for the production of Avian-B coating. The pre-mix consists of analytically pure barium sulfate, binder, distilled water, and coating dispersant agents. Instructions for mixing and application should be followed closely to assure the best final product.



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Safety Data Sheet
Revision #6: 2/5/2018
Avian B Pre-Mix Reflectance Coating

SECTION I PRODUCT IDENTIFICATION

Avian-B is a well characterized white reflective coating that has been used for diffuse reflectance applications for more than 20 years. The coating is highly lambertian and exhibits reflectance of >97% over from 350-850 nm and greater than 92% from 250-1300 nm The coating is easily applied to most metal substrates and can be applied to other materials with proper surface preparation. The applied coating is stable from -40 degrees C to +90 degrees C. This coating is primarily designed for laboratory, as opposed to field, applications. and inexpensive to apply.

Product Name: Avian-B Premix Reflectance Coating
 DOT Shipping Name: Same
 DOT Hazard Class: Not a hazardous material per CFR49 172.101
 Hazard Rating: Health: 1; Flammability: 0; Reactivity: 1
 Protective Equipment: Safety Glasses, Gloves, Ventilation
 Precautionary Label: Keep away from sparks and flame. Use with adequate ventilation.
 Supplier Information Avian Technologies, 116 Newport Road, New London NH 03257
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For **Emergency**, Health, Safety and Environmental Information, call 1-800-424-9300 in the United States and 613-996-6666 in Canada. International: Call 1-703-527-3887. For all other purposes, call 603-526-2420.

SECTION II HAZARDS IDENTIFICATION

Emergency Overview: As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

Substance	Barium Sulfate	Polyvinyl Alcohol
Health Rating	1-Slight (associated with dust if dry)	0-None
Flammability Rating	0-None	2-Moderate
Reactivity Rating	1-Slight	0-None
Contact Rating	1-Slight	0-None
Lab Protective Equipment	Goggles, Lab Coat, Proper Gloves	Goggles, Lab Coat, Class B Extinguisher
Storage Color Code	Green (General)	Red (Flammable)
Storage Code for Avian B	Product as shipped: Keep in dark (store in brown bottle) General (contains water)	

Potential Health Effects

Substance	Barium Sulfate	Polyvinyl Alcohol
Inhalation	Not expected to be a health hazard	If allowed to dry out-small potential of nuisance dust. If heated above 200C, fumes irritating eyes, nose, and throat may

		be evolved. Symptoms would include tears in the eyes with itching, redness, burning in throat and nose.
Ingestion	Not expected to be a health hazard.	Not expected to be a health hazard via ingestion.
Skin Contact	No adverse effects expected	Not expected to be a health hazard from skin exposure
Eye Contact	No adverse effects expected.	Mechanical irritation only if dry.
Chronic Exposure	When allowed to dry (not advisable), long-term inhalation of dust may lead to deposition in the lungs in sufficient quantities to produce baritosis-a benign pneumoconiosis. This produces a radiological picture even though symptoms and abnormal signs may not be present.	No human data. Animal studies showed a drop in hemoglobin and erythrocyte (red blood cell) number with eventual complete coagulation inhibition. Some animal studies also noted possibility of carcinogenicity.
Aggravation of Pre-existing conditions	No information found.	No information found.

SECTION III COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Mol. Wt.	Chemical Formula	Occ. Exp. Limit Pv (mmHg)	Hazardous
Barium Sulfate	7727-43-7	233.39	BaSO ₄	n/a	Yes
Distilled Water	n/a	18.02	H ₂ O	n/a	No
Polyvinyl Alcohol	9002-89-5		(-CH ₂ CHOH-) _n	Negligible	Yes

SECTION IV FIRST AID MEASURES

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

SECTION V FIRE FIGHTING MEASURES

Fire: Not expected to be a fire hazard. Component polyvinyl alcohol has a flash point of 79°C and fire is possible at elevated temperatures if material becomes dry.

Explosion: Not considered to be an explosion hazard. Polyvinyl alcohol can be hazard if fine dust is dispersed in air in sufficient concentration. This is unlikely if product is properly stored and kept moist.

Special Information: 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 VI: ACCIDENTAL RELEASE MEASURES

Ventilate area or leak or spill. Remove sources of ignition. Wear appropriate personal protective equipment as specified in Section VIII. Clean up spills prior to material drying. If material does become dry, clean up in a manner that does not disperse dust into the air. Use wet sweeping and non-sparking tools and equipment. Pick up spill for recovery or disposal and place in a closed container.

SECTION VII: HANDLING AND STORAGE

Product should be stored in brown bottles protected from light and in a cool, dry, ventilated area. Avoid conditions that would lead to dust formation.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

Based on Barium Sulfate

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 15mg/m³ total dust, 5mg/m³ respirable dust

ACGIH Threshold Limit Value (TLV): 10mg/m³ (TWA)

Ventilation System: In general, dilution is a satisfactory health hazard control for this substance.

Local exhaust should be considered if conditions of use create discomfort for the user.

Personal Respirators (NIOSH Approved): If dust is present and exposure limits for dust are exceeded, a full-face piece particulate respirator (NIOSH Type N100 filters) may be worn.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash stations and quick drench facilities in the work area.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Appearance: Product is sold as a slurry in water. (Thick, white liquid.)

Melting Point: 428°F

Percent volatiles by volume: Solids are not volatile-Material contains water

Evaporation Rate: Information not available

Water solubility: Binder Appreciable; Pigment Not Appreciable

Flash Point: Not applicable

Auto Ignition Temperature: Information not available

Odor: Odorless

Solubility: Not soluble in water.

pH: Neutral in water.

Boiling Point: Barium sulfate decomposes at temperatures over 1600°C.

Vapor Density: No information found.

Vapor Pressure: No information found.

Evaporation Rate: No information found.

SECTION X STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions and proper storage. Store in dark brown bottles and avoid temperature extremes.

Hazardous Decomposition Products: Burning of barium sulfate may produce sulfur oxides. As an organic compound, polyvinyl alcohol will produce carbon monoxide under conditions that lead to incomplete combustion.

Hazardous Polymerization: Will not occur Incompatibilities: Aluminum, phosphorus, strong oxidizers Conditions to avoid: Do not let product dry out.

SECTION XI TOXICOLOGICAL INFORMATION

Data for major components given. No other data found.

Material	Barium Sulfate	Polyvinyl Alcohol
LD50/LC50	No information found related to normal routes of occupational exposure	Over 20gm/kg. Investigated as a tumorigen.
NTP Carcinogen	Known: No Anticipated: No	Known: No Anticipated: No
IARC Category	None	3

SECTION XII ECOLOGICAL INFORMATION

Ecological Fate: Barium sulfate may accumulate to some extent.

Environmental Toxicity: None found.

SECTION XIII DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal 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 XIV TRANSPORTATION INFORMATION

Not regulated

SECTION XV REGULATORY INFORMATION

-----/Chemical Inventory Status-Part 1/-----

Ingredient	TSCA	EC	Japan	Australia
-				
Barium sulfate (7727-43-7)	Yes	Yes	Yes	Yes
Polyvinyl alcohol (9002-89-5)	Yes	No	Yes	Yes

-----/Chemical Inventory Status-Part 2/-----

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Barium sulfate (7727-43-7)	Yes	Yes	No	Yes
Polyvinyl alcohol (9002-89-5)	Yes	Yes	No	Yes

-----/Federal, State, and International Regulations-Part 1/-----

Ingredient	- SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Ctg.
Barium sulfate (7727-43-7)	No	No	No	No
Polyvinyl alcohol (9002-89-5)	No	No	No	No

-----Federal, State, and International Regulations-Part 2-----

Ingredient	RCRA	TSCA	261.33	8(d)
		CERCLA		
Barium sulfate (7727-43-7)		5000		U154
Polyvinyl alcohol (9002-89-5)		No		No

Chemical Weapons Convention: No
TSCA 12(b): No
CDTA: No
SARA 311/312: Acute: Yes; Chronic: No; Fire: No; Pressure: No
Reactivity: No

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR), GHS and the MSDS contains all of the information required by the CPR and GHS.

SECTION XVI OTHER INFORMATION

NFPA Ratings: Health: 0; Flammability: 0; Reactivity: 0

Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedures, avoid all unnecessary exposure to the chemical substance and ensure proper removal from skin, eyes, and clothing.

Label Precautions: None

Label First Aid: None

Product Use: Coating

Revision Information: February 2, 2018 Update to standardized format.

Disclaimer:

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