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Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BK-W-HSMS

SYNONYMS: Hemispherically coated beads, half-shell microspheres

MANUFACTURER: Cospheric LLC, 449 N. Hope Ave, Santa Barbara, CA 93110
info@cospheric.com

EMERGENCY PHONE: (734) 368-3809 Hours of operation M-F 9am to 5pm PST

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
Polyethylene	9002-88-4	50-99%
Complex Inorganic Pigment	68186-94-7	1-30%
Titanium Dioxide	13463-67-7	1-50%
Proprietary Ingredients	NA	1-5%
Aluminum Hydroxide	21645-51-2	0-5%
Amorphous Silica	7631-86-9	0-5%

HMIS HAZARD CLASS: Health 1 Fire 0 Reactivity 0 PPE E

This product is not hazardous under the U. S. OSHA Hazard Communication Standard (29 CFR § 1910.1200). This product is not a controlled product under the Canadian Hazardous Products Act or Regulations. This product is not classified under the European Dangerous Substance Directive 67/548 and the European Dangerous Preparations Directive 88/379

SECTION 3: HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS:

This product contains pigments that belong to the mixed metal oxide pigment class. A very small percentage of the starting materials that may remain in this product are considered hazardous under OSHA.

POTENTIAL HEALTH EFFECTS:

Eye contact - may cause eye irritation
Skin contact - may cause skin irritation
Ingestion - may be harmful if swallowed
Slipping hazard can be present when spilled on floor.

PRIMARY ROUTES OF EXPOSURE: Skin and eye contact.

SECTION 4: FIRST AID MEASURES

EYES: Flush irritated eye with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical care.

SKIN: Flush skin with plenty of soap and water for at least 15 minutes, while removing contaminated clothing and shoes. Seek medical care.

INHALATION: Remove victim to well-ventilated area. If condition does not improve, seek medical care.

INGESTION: Not considered a likely route of exposure. Seek immediate medical care.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY: Not regulated as flammable or combustible.

PRODUCTS OF COMBUSTION: Carbon oxides (CO, CO₂).

CONDITIONS TO AVOID: Prevent the accumulation of air borne dust/dust cloud, open flames, sparks, static, heat.

EXTINGUISHING MEDIA: In case of fire, use foam or CO₂ fire extinguishers.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and public waterways.

FIRE HAZARD REMARKS: As with most solid particulate organic materials, high concentrations of dusts from this product suspended in air are an explosion hazard in the presence of sparks, flames, and heat. Do not allow dust to accumulate on equipment and surfaces where this product is used. In the National Fire Protection Association (NFPA) Code 499, a "combustible dust" is any finely divided solid material 420 microns or less in diameter that presents a fire or explosion hazard when dispersed in air. Polyethylene is a Group G combustible dust and has a Layer or Cloud Ignition Temperature of 380°C (716°F) [NFPA Code 499]. When there is the potential of a dust explosion in a use location, the proper electrical equipment and installation should be used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Put on appropriate NIOHS/MSHA approved respirator. Wear chemical gloves, goggles, and lab coat.

SPILL RESPONSE: Evacuate surrounding areas, if necessary. Vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

ACCIDENTAL RELEASE REMARKS: Spilled material can produce a slipping hazard.

SECTION 7: HANDLING AND STORAGE

HANDLING: Use with adequate ventilation. Avoid contact with skin and eyes. Wash thoroughly after handling and before mealtimes. Follow all MSDS and label precautions even after container is emptied since it may contain residual material.

STORAGE: Store containers closed in ambient and dry location.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LEVELS:

Component:	OSHA PEL	ACGIH TLV	Unit
Nuisance dust (>5 micron)	15	10	mg/m ³
Iron Oxide	10	5	mg/m ³
Manganese Compound	5	0.2	mg/m ³
Copper Compound	1 as dust 0.1 as fume	1 as dust 0.2 as fume	mg/m ³
Titanium Dioxide	15	10	mg/m ³
Amorphous Silica	80	-	mg/m ³

ENGINEERING CONTROLS:

Ventilation: Provide adequate general mechanical exhaust.

PERSONAL PROTECTION:

Eye Protection: Safety glasses with side shields or goggles.

Skin Protection: Rubber gloves, wash at meals and end of shifts.

Respiratory Protection: Use NIOSH/MSHA approved respirator as needed to control exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Bulk microspheres appear to be grey in color, tasteless and odorless.

PHYSICAL STATE: Dry powder

MELTING POINT: 108.9 to 116.7°C (228 to 242.1°F)

SPECIFIC GRAVITY: 0.95 – 1.3 @16°C (60°F)

SOLUBILITY IN WATER: Insoluble

FLASH POINTS: Open cup: >175°C (347°F) (Cleveland.).

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Open flames and sparks, extreme heat.

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY DATA:

Polyethylene in its solid form is not expected to have any significant toxicological effect, except intestinal blockage if swallowed. Rats after inhaling polyethylene dust developed mild inflammatory changes in the lungs (Kochetkova et al, 1971). Prolonged inhalation of thermal degradation products from polyethylene caused neurological effects in rats (Zitting & Savolainen, 1979)

Copper compounds may cause skin and eye irritation. Ingestion may cause nausea, vomiting and diarrhea due to interaction with acid in stomach and formation of soluble copper salts. Inhalation of copper fumes may cause respiratory irritation, fever, chills, metallic taste and nausea.

Manganese compounds are not considered toxic by ingestion or skin contact. Chronic inhalation of manganese oxide dust during mining or fumes during steel processing can affect the brain.

Titanium Dioxide, Alumina Hydroxide & Amorphous Silica is a slight eye irritant and a slight skin irritant, but not a skin sensitizer in animals. Short term inhalation studies of titanium dioxide mixtures show a slight fibrogenic response. Repeated inhalation exposure to Titanium Dioxide, Amorphous Silica & Amorphous Silica caused pulmonary changes including reversible inflammation. Long-term exposure caused pulmonary changes including reversible inflammation, vascular obstruction and emphysema. Repeated and long term ingestion of Titanium Dioxide and Amorphous Silica caused no significant toxicological effects. Ingestion of Alumina Hydroxide caused growth impairment, and bone changes due to phosphate depletion in animals but ingestion of phosphate eliminates these changes; no evidence of toxicity was noted.

POSSIBLE ROUTES OF EXPOSURE:

Inhalation is not likely for materials > 5micron in diameter.

Ingestion is not likely, but possible if good hygiene practices are not followed.

Eye irritation

Skin contact may result in contact dermatitis

SECTION 12: ECOLOGICAL INFORMATION

REMARKS: Ecotoxicological data on analogous polymeric materials demonstrates that this product has a low aquatic toxicity to fish, algae, and daphnia. Under OECD guidelines this product is classed as inherently biodegradable. The product is unlikely to bioaccumulate due to the large polymeric nature of the homopolymer. Classification according to German Umweltbundesamt.de is "nwg".

SECTION 13: DISPOSAL CONSIDERATIONS

REMARKS: Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, state and local regulations. Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

SECTION 14: TRANSPORT INFORMATION

Not regulated.

SECTION 15: REGULATORY INFORMATION

SARA (311, 312): Acute Health Hazard, Chronic Health Hazard

SARA (313): Title III Toxic Chemical List

- Copper Compounds

- Manganese Compounds

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The statements made here are intended to describe the product with regard to necessary safety precautions. They do not guarantee special characteristics. This information is furnished without warranty, expressed or implied, except that it is accurate to the best of our current knowledge.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

PREPARATION INFORMATION: Updated on 11/12/2009