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Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: UVPMS-BR, UVPMS-BR-0.99, UVPMS-BR-1.00

SYNONYMS: UV fluorescent polyethylene microspheres, luminescent polymer microspheres, beads, balls, microparticles

MANUFACTURER: Cospheric LLC, PO Box 6762, Santa Barbara, CA 93160
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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
Polyethylene	9002-88-4	80-99%
Proprietary Ingredient	Proprietary Ingredient	0-20%

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

POTENTIAL HEALTH EFFECTS:

Ingestion may result in gastric disturbance.

Nuisance dust may cause temporary respiratory and eye irritation.

Slipping hazard can be present when spilled on floor.

PRIMARY ROUTES OF EXPSURE: Respiratory, skin and eye contact.

OSHA REGULATORY STATUS:

Carcenogenicity: A minor component of this product contains less than 0.1% free formaldehyde and may be capable of emitting formaldehyde at levels in excess of OSHA's action level under some conditions of use and storage. Formaldehyde is a potential cancer hazard.

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. If swallowed, drink two glasses of water. Never give fluids or induce vomiting if the victim is unconscious or having convulsion. If symptoms persist, seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY: Not regulated as flammable or combustible.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of sulphur, carbon, nitrogen and other toxic fumes.

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: Avoid dust formation. Take precautionary measures against static discharges. Do not heat unless fume controls in place. Formaldehyde emission can occur. 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, away from sources of heat and direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LEVELS:

Component:	OSHA PEL	ACGIH TLV	Unit
Nuisance dust (>5 micron)	10	10	mg/m ³

ENGINEERING CONTROLS:

Ventilation: Provide adequate general mechanical exhaust.
Do not heat unless fume control in place.

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: Microspheres appear to be red in color, tasteless and odorless.

PHYSICAL STATE: Dry powder

MELTING POINT: 105 to 120°C

SPECIFIC GRAVITY: 0.95 – 1.3 @20°C

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.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents, strong alkaline or acidic materials

HAZARDOUS DECOMPOSITION BY-PRODUCTS: Fumes may contain oxides of sulfur, carbon or nitrogen, or other toxic fumes.

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)

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

STATE REGULATIONS: California proposition 65: Warning: This product contains a chemical known to the state of California to cause cancer.

A minor component of this product contains less than 0.1% free formaldehyde and may be capable of emitting formaldehyde at levels in excess of OSHA's action level under some conditions of use and storage. Formaldehyde is a potential cancer hazard.

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 05/22/2012