



PO Box 6762, Santa Barbara, CA 93160
Phone: (805) 687-3747 Fax: (866) 708-0375
info@cospheric.com <http://www.cospheric.com>

Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PMPNS
SYNONYMS: PMMA nanospheres, Poly (methyl methacrylate) nanospheres
MANUFACTURER: Cospheric LLC, PO Box 6762, Santa Barbara, CA 93160
info@cospheric.com
EMERGENCY PHONE: (805) 687-3747 Hours of operation M-F 9am to 5pm PST

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
Poly (methyl methacrylate)	9011-14-7	100%

This product is not considered hazardous under the U. S. OSHA Hazard Communication Standard (29 CFR § 1910.1200).

SECTION 3: HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: Not regulated to be a health or physical hazard.

POTENTIAL HEALTH EFFECTS:

High concentrations of nuisance dust may cause respiratory and eye irritation.

May cause irritation of the nose, throat and lungs.

Repeated or prolonged exposure may cause allergic skin rashes.

Slipping hazard can be present when spilled on floor.

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

POTENTIAL ENVIRONMENTAL EFFECTS: None

SECTION 4: FIRST AID MEASURES

EYES: Flush irritated eye with water for 15 minutes, including under eyelids. If discomfort persists or unable to remove dust, seek medical care.

SKIN: Clean thoroughly with water and soap. Get medical help if discomfort persists.

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

INGESTION: Not considered a likely route of exposure. Rinse mouth with water. Seek medical care if amount was large.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY: Not regulated as flammable or combustible.

CONDITIONS TO AVOID: Prevent the accumulation of air borne dust/dust cloud, open flames, sparks, static, heat. Polymer dust is combustible, explosive limits of the polymer particles suspended in air are approximately those of coal dust.

EXTINGUISHING MEDIA: In case of fire, use water, carbon dioxide or dry chemical fire extinguishers.

SPECIAL FIRE FIGHTING PROCEDURES: Avoid extinguishing methods that generate dust clouds. Water streams can disperse dust into air, producing a fire hazard and possible explosion hazard. Fire-fighters should wear self-contained breathing apparatus.

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. 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. Sweep 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 a cool dry place away from heat, sparks, flame and direct sunlight. Close container after each use. Ground all metal containers when transferring. Use explosion-proof equipment. Store away from combustibles and incompatible materials.

EXPLOSION HAZARD: Polymer dust is combustible, explosive limits of the polymer particles suspended in air are approximately those of coal dust.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LEVELS:

Component:	OSHA PEL	ACGIH TLV	Unit
Nuisance dust (>5 micron)	15	10	mg/m ³

ENGINEERING CONTROLS:

Ventilation: Use good local exhaust at processing equipment, including buffers, sanders, grinders and polishers. High temperature processing equipment should be well ventilated. Use explosion-proof equipment. Provide ventilation if necessary to control exposure levels below airborne exposure limits.

PERSONAL PROTECTION:

General: Dust collectors are recommended for handling powder in bulk.

Eye Protection: Safety glasses with side shields or goggles. Eye flushing equipment immediately available.

Skin Protection: Wear nitrile, neoprene, pvc, latex or other impermeable gloves, wash at meals and end of shifts.

Respiratory Protection: Avoid breathing dust and mist. Use dust mask.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Nanospheres appear to be white in color, fine odor in bulk.

PHYSICAL STATE: Dry powder

SOLUBILITY IN WATER: Insoluble

FLASH POINTS: TAG Closed: 580F/ 304C

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Methacrylate monomers

CONDITIONS TO AVOID: Heating above 240C/464F. Open flames and sparks, extreme heat.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizing agents.

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY DATA:

Acute Oral Toxicity: LD50 Oral (Rat): 7990mg/kg

Acute Dermal Toxicity: LD50 Dermal (Rabbit):35,500mg/kg

Acute Inhalation Toxicity: LC50 Inhalation (Rat): >12,500 to 16,500ppm for 0.5hours

Since this product contains a very low concentration of active components, the primary toxicological information is derived from the copolymers. Further hazardous properties cannot be excluded. The product should be handled with care when dealing with chemicals.

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

Acute Toxicity to Fish: Flathead minnows and goldfish TLm24: 420ppm

Bluegills TLm24: 368ppm

The ecotoxicological and chemical fate properties have not been fully investigated. Do not allow to enter drinking water supplies, wastewater or soil.

SECTION 13: DISPOSAL CONSIDERATIONS

REMARKS: May be disposed of in a landfill or incinerated. 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

Not applicable to any components of this product

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 2/10/2015