

MATERIAL SAFETY DATA SHEET

MICRO POLYURETHANE powder

This product is not regulated under the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

SECTION 1:

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Mobius Technologies, Inc.
125 Estrella Court, Lincoln, CA 95648

MEDICAL EMERGENCY PHONE Number: 916-543-6484 or 530 798 0388

Product Name: **MPU powder - MICRONIZED POLYURETHANE powder**

MPU Grades: **MPU 300-2/XXX, MPU 300-2/XXX-DX**

Other Names: MOBIUS POWDERED URETHANE, PU FOAM POWDER, POLYURETHANE POWDER, POLYURETHANE FLEXIBLE-FOAM POWDER

2. COMPOSITION/INFORMATION ON INGREDIENTS

Polyurethane foam powder, < 250 µm particles, CAS# 9009-54-5	100%
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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Yellow, green, white, or gray powder. No significant immediate hazards for emergency response are known.

Accidental burning (smolder) of the product will emit toxic and combustible gases.

As for purposeful burning (incineration), urethane foam wastes are appreciated as a valuable fuel in industrial incinerators as they have excellent calorific value, and can be incinerated safely.

POTENTIAL HEALTH EFFECTS

EYE: Dust may cause slight, temporary eye irritation.

SKIN: May cause mild skin irritation. No significant absorption through the skin.

INGESTION: Oral toxicity is considered to be very low. Small amounts swallowed incidental to normal handling are not likely to cause injury.

INHALATION: Nonvolatile. Precautions should be taken to avoid breathing dust. Dust may cause respiratory irritation in sensitive individuals.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No specific data available, however, repeated exposures are not anticipated to cause significant adverse effects.

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4. FIRST-AID MEASURES

Eye Contact

Flush eyes with plenty of water.

Skin Contact

Wash off in flowing water or shower.

Ingestion

If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water, water fog, carbon dioxide, dry chemical, and foam.

Fire-Fighting Instructions

Keep people away. Isolate fire area and deny unnecessary entry. Burning powder can create combustible gases and the possibility of flashbacks.

Protective Equipment for Fire-Fighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Flammable Properties

FLASH POINT: 315° C

AUTOIGNITION TEMPERATURE: 370° C to 430° C according to ASTM D 1929

Flammability Limits

LFL: not determined.

UFL: not determined.

Hazardous Combustion Products

Polymers will decompose in fire above 370°C. Smoke emission will start at 220°C. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: carbon dioxide, carbon monoxide, and nitrogen oxides.

Other Flammability Information

Dispersions of finely divided combustible material in air can create dust explosion hazards.

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6. ACCIDENTAL RELEASE MEASURES

Protect People

May be a slipping hazard. Clean up promptly and keep people from walking through areas with spilled powder.

Protect the Environment

Contain the material and reduce airborne dust with water.

Clean Up

Thoroughly broom floor areas to minimize dust, or/and clean up them with water if possible

7. HANDLING AND STORAGE

Handling

The material is light, and care should be taken to avoid creating airborne dust.

Storage

Keep containers tightly closed when not in use. Large quantities should be stored in well-sprinklered areas away from heat or open flame. Notify local fire companies of presence of large quantities of this material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Personal Protective Equipment

Eye/Face Protection

Use safety glasses.

Skin Protection

No precautions other than clean body-covering clothing should be needed.

Respiratory Protection

For most conditions, a NIOSH-approved dust mask should be sufficient; However, if discomfort is experienced, use an approved air-purifying dust/mist respirator.

Exposure Guidelines

None established.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	yellow, green/white, or gray
Odor	:	slight
Vapor Pressure	:	very low
Evaporation Rate	:	none (butyl acetate=1)
Vapor Density	:	not applicable
Melting Point	:	Decomposes above 170°C
Solubility in Water	:	not soluble.
Specific Gravity	:	about 1.2
Particle Size	:	95% less than 200 microns, with a significant fraction less than 100 microns

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under recommended storage conditions.

Conditions to Avoid

Product can decompose at elevated temperatures.

Incompatibility with Other Materials

Avoid contact with oxidizing materials. Avoid contact with acids. Avoid contact with flammable liquids as high surface area may increase their flammability.

Hazardous emissions when burning (smolder) at temperature below 400°C

May include and are not limited to: carbon dioxide, carbon monoxide, nitrogen oxides, isocyanates, aldehydes, ketones, organic acids, amines, and polymer fragments.

Hazardous emissions when burning (incineration) at temperature above 400°C

Decomposition products such as carbon monoxide, carbon dioxide, gaseous hydrocarbons and nitrogen containing products can be generated in various concentrations depending on the combustion conditions

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Skin Contact

Not determined. Skin absorption is very unlikely.

Ingestion

Not determined. Oral toxicity is anticipated to be very low due to physical properties.

12. ECOLOGICAL INFORMATION

Movement and Partitioning

No bioconcentration is expected because of high molecular weight and crosslinking.

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13. DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. MOBIUS TECHNOLOGIES, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information on Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is regulated by D.O.T. under classification 65 when shipped domestically by land.

For international transportations, PU foam powder is not classified for conveyance or supply under the Carriage of Dangerous Goods (classification, packaging and labeling) and Use of Transportable Pressure receptacles regulations 1996.

15. REGULATORY INFORMATION

EC classification: According to EC regulations this product is not classified or labeled.

Chemical Inventory: The ingredients of this product are on the EINECS inventory.

This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard

16. OTHER INFORMATION

Disposal considerations: Under EU environmental Regulations and Directives; there are no special requirements for the disposal of PU foam powder.

Post consumer Waste: PU foam powder can be recycled in the production of virgin flexible PU foam.

The information herein is given in good faith, but no warranty, express or implied, is made. Consult Mobius Technologies, Inc. for further information.