

# MATERIAL SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

**Product Identification:** Purafil® Chemisorbant Media

**Product Synonyms:** Purafil® Media, Purafil® II Chemisorbant Media, Purafil® FS Chemisorbant, Purafil® Diving Life Support Media, Purasorb Media, Puralum WW Media, Permasorb® Media

**Use of the preparation:** This product is intended for use in gas-phase air filtration.

**Company Identification:**

Purafil, Inc.  
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**Company Contact Numbers:**

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## 2. COMPOSITION

Common Chemical Name	Synonyms	CAS Number	Wt %	EC Number	EU Classification
aluminum oxide (non-fibrous)	activated aluminas; activated and amorphous aluminas	1333-84-2*	≤67		
water	dihydrogen oxide	7732-18-5	≤35	231-791-2	
proprietary ingredient	--	--	≤26	--	
potassium permanganate	permanganate of potash; chameleon mineral; permanganic acid, potassium salt	7722-64-7	4 - 8	231-760-3	O; R8 Xn; R22 N; R50-53

\* For TSCA inventory reporting purposes, CAS No. 1344-28-1 (EC# 215-691-6) was assigned for all forms of aluminum oxide instead of the CAS No. 1333-84-2 as indicated above.

**Composition Comments:** For the full text of R phrases mentioned in this section, see Section 16.

## 3. HAZARDS IDENTIFICATION

**Most Important Hazards:**

- If crushed or handled extensively, dust may evolve and can be irritating to the eyes, skin, and respiratory tract.

**Adverse Human Health Effects:**

- The following medical conditions may be aggravated by exposure to the product:  
asthma, chronic lung disease, and skin rashes.
- If the product contacts the skin with water, it may leave a stain of insoluble products on the skin. This stain will be washed away/rubbed off over a period of time (hours to days).

**Environmental Effects:**

If contacted by water, the sodium permanganate may leach out and the water may turn pink to purple in color. Sodium bisulfite will clarify the water (by chemical reduction), but will give off sulfur dioxide and should only be used in well ventilated areas. Local regulations should always be consulted and followed.

**Emergency Overview:**

Inhalation: Move to fresh air. If breathing difficulty occurs or persists, seek medical attention.  
Skin Contact: Wash area with large quantities of water.  
Eye Contact: Flush with large quantities of water. Seek medical attention.  
Ingestion: Seek medical attention.

**Other Information:**

This media is classified by the manufacturer for health effects according to EU Directive 1999/45/EC with Xi; R36/37/38.

**4. FIRST-AID MEASURES**

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First aid measures should be taken as indicated below for the following routes of exposure.

**Inhalation:** Move to fresh air. If breathing difficulty occurs or persists, seek medical attention.  
**Skin Contact:** Wash area large quantities of water.  
**Eye Contact:** Flush with large quantities of water. Seek medical attention.  
**Ingestion:** Seek medical attention.

**Notes to Physician:**

Product is expected to be non-toxic but is expected to be an eye irritant in the powder form. Treatment is recommended to be symptomatic and supportive.

**5. FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media:**

Use fire fighting measures that suit the environment.

**Specific Hazards:**

Corrosive fumes may be generated in the event of a fire.

**Protection of Firefighters:**

Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing.

**6. ACCIDENTAL RELEASE MEASURES**

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**Personal Precautions:**

Protective clothing appropriate for the environment should be worn. Goggles or safety glasses with side shields, NIOSH approved dust masks, rubber or plastic gloves, and full cover clothing covering arms and legs are recommended.

**Environmental Precautions:**

See section 3. HAZARDS IDENTIFICATION, Environmental Effects.

**Methods for Cleaning Up:**

Clean up using dry procedures (broom, shovel, etc.); avoid dusting.

**Recovery:**

Product may be recovered for use if it has not come in contact with liquid, changed color, or been exposed to significant amounts of gaseous contaminants.

**Neutralization:**

See section 3. HAZARDS IDENTIFICATION, Environmental Effects.

**Disposal:**

See section 13. DISPOSAL CONSIDERATIONS.

**7. HANDLING AND STORAGE**

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**Handling:**

Use air conveying (vacuum) for bulk removal. If manual handling is used for transfer (from vessel, slingbags, boxes, or pails), use mechanical ventilation or other measures to remove airborne dust.

**Prevention of User Exposure:** See Section 8

**Precautions for Safe Handling:**

- Avoid crushing the product to keep dusting to a minimum. As described above, mechanical ventilation or other measures may be needed to remove airborne dust.
- Protect from water and exposure to contaminated air (gaseous, particulate, and aerosol contaminated), otherwise the product may be rendered useless.

**Storage:**

General good storage practices should be followed.

**Suitable Conditions:**

Store in a cool, dry area and keep in original, closed containers.

**Incompatible Products:**

- Product should be kept protected from water and exposure to contaminated air (gaseous, particulate, and aerosol contaminated), otherwise the product may be rendered useless."

**Recommended Packaging Materials:**

- Corrugated boxes of 350 lb, double wall quality, with 4 mm plastic liners.
- Injection molded, polystyrene pails and lids including a neoprene seal.

**Not Suitable Packaging Materials:**

Porous materials allowing contact with water, air, and the contaminants contained therein.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Exposure Limit Values:**

Inert or Nuisance Dust	5 mg/m <sup>3</sup> respirable fraction	OSHA PEL
	15 mg/m <sup>3</sup> total dust	OSHA PEL

**Exposure Controls:**

Minimize eye and skin contact by using appropriate protective equipment. Use local or general room ventilation to control airborne dust that may be generated.

<b>Respiratory Protection:</b>	NIOSH approved dust mask
<b>Hand Protection:</b>	Rubber or plastic gloves
<b>Eye Protection:</b>	Goggles or safety glasses with side shields
<b>Skin and Body Protection:</b>	Full cover clothing covering arms and legs.

**Hygiene Measures:** Do not inhale dust and avoid contact with eyes.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**General Information**

Physical state:	solid
Form:	spherical pellets approximately 1.5 - 6.4 mm (1/16 – 1/4 in.) in diameter
Odor:	no significant odor
Color:	purple

**Health, Safety, Environmental Information**

pH:	not applicable
Boiling point:	not applicable
Flash point:	not applicable
Flammability:	not flammable
Explosive properties:	not explosive
Oxidizing properties:	not considered an oxidizing agent; minimal oxidizing potential
Vapor pressure:	not applicable
Bulk density:	0.800 g/cc (50 lb/ft <sup>3</sup> )
Solubility:	Partially soluble in water. Will dissolve in concentrated acids and alkalis.
Partition coefficient:	not applicable
Viscosity:	not applicable

Vapor density: not applicable  
Evaporation rate: not applicable

## 10. STABILITY AND REACTIVITY

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### Stability:

Stable under normal conditions

### Conditions to Avoid:

None

### Materials to Avoid:

Halogen acids – Reaction with halogen acids may release the halogen gas.

### Hazardous Decomposition Products:

Corrosive fumes may be generated in the event of a fire

### Intended Use and Foreseeable Misuse:

Intended use is for air purification from gaseous contaminants. The product is not intended to remove dangerous particulates or biological contaminants. The product is not intended to purify water.

## 11. TOXICOLOGICAL INFORMATION

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**Acute Toxicity:** Expected to be non-toxic<sup>[1]</sup>, not tested

**Local Effects:** See section 3. HAZARDS IDENTIFICATION, Adverse Human Health Effects.

### Sensitization:

**Primary skin irritation and corrosivity (rabbits):** expected to be non-irritant<sup>[1]</sup>, not tested

**Eye irritation (rabbits):** expected to be irritant<sup>[1]</sup>, not tested

**Primary Route of Entry:** Inhalation, ingestion, skin contact, eye contact

## 12. ECOLOGICAL INFORMATION

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Not determined.

## 13. DISPOSAL CONSIDERATIONS

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### Waste From Residues:

Spent media that has removed toxic chemicals should be examined for specific hazards. Local regulations should always be consulted and followed.

**Contaminated Packaging:** not relevant

## 14. TRANSPORT INFORMATION

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**International Regulations:** not applicable

**Proper Shipping Name:** not applicable

## 15. REGULATORY INFORMATION

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### Regulations:

This section contains information specifically applicable to the chemical product relative to the following regulations. Local regulations should always be consulted and followed.

### SARA Title III (Superfund Amendments and Reauthorization Act)

#### Section 302 Extremely Hazardous Substances (40CFR355):

not listed

#### Section 312 Hazard Categories (40CFR370.2):

Only expected as Acute (eye irritant), see Section 11 TOXICOLOGICAL INFORMATION

**Section 313 Reportable Ingredients (40CFR372):**

The potassium permanganate portion of the media contains a high percentage (~97%) manganese compound as a part of the chemical structure (manganese compounds CAS Reg. No. N/A) and is subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1987 and 40CFR372.

**EU Classifications & Labeling**



Xi – Irritant

**Risk Phrases:**

R36/37/38: Irritating to eyes, respiratory system and skin

**Safety Phrases:**

S3: Keep in a cool place.

S8: Keep container dry.

S24/25: Avoid contact with skin and eyes.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28: After contact with skin, wash immediately with plenty water.

S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

S63: In case of accident by inhalation: remove casualty to fresh air and keep at rest.

**16. OTHER INFORMATION**

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**Ingredient R(isk) Phrase Definitions:**

R8: Contact with combustible material may cause fire.

R22: Harmful if swallowed.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Disclaimer:**

The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones, which exist. Purafil, Inc. makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. The user has sole responsibility to determine the suitability of the material for any use and the manner of use contemplated

<sup>[1]</sup> According to methods described in US Government Document 29CFR1910.1200.