



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product Identification: ESD Triple-Blend Media

Product Synonyms: Makeup Air Media

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

Company Identification:

Purafil, Inc.
2654 Weaver Way
Doraville, GA 30340 / USA

Company Contact Numbers:

Telephone: (770) 662-8545
Facsimile: (770) 263-6922

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*	30-35		
carbon	activated carbon	7440-44-0	30-35	231-153-3	
water	dihydrogen oxide	7732-18-5	5-30	231-791-2	
sodium bicarbonate	baking soda; bicarbonate of soda	144-55-8	15-25	205-633-8	
sodium permanganate	permanganic acid sodium salt solution	10101-50-5	5-10	233-251-1	O, Xn, N; R8, R22, R50/53
magnesium oxide	magnesia, calcined magnesium, calcined brucite	1309-48-4	≤25	215-171-9	
ash	--	--	1-5	--	

*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.
- Confined space entry. Appropriate safety precautions should be taken when entering any confined space. Entering containers or media vessels/tanks housing activated carbon for inspection, maintenance, etc. may constitute a confined space entry. In confined spaces, activated carbon may remove oxygen from the air causing severe hazards for workers entering such spaces. Before and during the entrance of a confined space all local, state, and federal regulations should be followed.
- Solutions of this product may be caustic due to high pH.

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).
- In solution, this product may produce a basic (caustic) solution and similar precautions should be taken as those for basic solutions when such is present.

Environmental Effects:

- If the product is contacted by water, the potassium 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.
- If contacted by water, the active ingredients may produce a basic solution depending on amounts of media and water. If such a solution is produced, the pH should be checked and kept within local regulations by buffering with suitable neutral or acidic agent.

Emergency Overview:

- Inhalation: Move to fresh air. If breathing difficulty occurs or persists, seek medical attention.
- Skin Contact: Wash area with soap and 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

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 with soap and 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 and only an eye irritant in the powder form. Treatment is recommended to be symptomatic and supportive. Product may form a basic (caustic) solution, treat the affected person appropriately.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use fire fighting measures that suit the environment.

Specific Hazards:

Corrosive fumes, hydrogen, and carbon monoxide 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

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

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

Prevention of Fire and Explosion:

Contact with strong oxidizers may result in the generation of heat.

Precautions for Safe Handling:

- Confined space entry. Appropriate safety precautions should be taken when entering any confined space. Entering containers or media vessels/tanks housing activated carbon for inspection, maintenance, etc. may constitute a confined space entry. In confined spaces, activated carbon may remove oxygen from the air causing severe hazards for workers entering such spaces. Before and during the entrance of a confined space all local, state, and federal regulations should be followed.
- Avoid crushing the product to keep dusting to a minimum. As described under Handling 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."
- Contact with strong oxidizers may result in the generation of heat.

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

Exposure Limit Values:

Inert or Nuisance Dust	5 mg/m ³ respirable fraction	OSHA PEL
	15 mg/m ³ 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.

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical state:	solid
Form:	spherical and cylindrical pellets approximately 1.5 – 6.4 mm (1/16 – 1/4 in.) in diameter
Odor:	no significant odor
Color:	black, dark gray, purple, and blue

Health, Safety, Environmental Information

pH:	not applicable
Boiling point:	not applicable
Flash point:	not applicable
Flammability:	not flammable under normal conditions
Explosive properties:	not explosive
Oxidizing properties:	not considered an oxidizing agent; minimal oxidizing potential
Vapor pressure:	not applicable
Bulk density:	0.681 g/cc (42.5 lb/ft ³)
Solubility:	partially soluble in water, more soluble in concentrated acids and alkalies
Partition coefficient:	not applicable
Viscosity:	not applicable
Vapor density:	not applicable
Evaporation rate:	not applicable

10. STABILITY AND REACTIVITY

Stability:

stable under normal conditions

Conditions to Avoid:

none known

Materials to Avoid:

Strong oxidizers - Contact with strong oxidizers may result in the generation of heat.

Hazardous Decomposition Products:

Corrosive fumes, hydrogen, and carbon monoxide 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

Acute Toxicity: expected to be non-toxic^[1], 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^[1], not tested

Eye irritation (rabbits): expected to be irritant^[1], not tested

Primary Route of Entry: inhalation, ingestion, skin contact, eye contact

12. ECOLOGICAL INFORMATION

Not determined.

13. DISPOSAL CONSIDERATIONS

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

International Regulations: not applicable

Proper Shipping Name: not applicable

15. REGULATORY INFORMATION

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

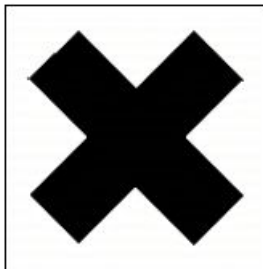
Section 312 Hazard Categories (40CFR370.2):

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

Section 313 Reportable Ingredients (40CFR372):

The sodium permanganate portion of the media contains a high percentage 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 of soap and 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

Ingredient R(isk) Phrase Definitions:

- R8: Contact with combustible material may cause fire.
R22: Harmful if swallowed.
R35: Causes severe burns.
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

^[1] According to methods described in US Government Document 29CFR1910.1200.