



SAFETY DATA SHEET

Section 1: Identification

Product Name: Potassium Permanganate Filter

Product Code: BF001, BF005, BF007, BF009,
BF014, BF021, BF025, BF035
BF052, BF053, BF054, BF055,
BF056, BF057, BF058

Recommended Use: Granular media for use in gas phase filtration

Restrictions on Use: Use only as directed
Not for use with water

Details of Supplier: Mopec
800 Tech Row
Madison Heights, MI 48071
(800) 362-8491

Emergency Telephone: Chemtrec – 1-800-424-8300

Section 2: Hazard(s) Identification

Hazard Classification: Not Classified

Signal Word(s): Not Applicable

Hazard Statements: May cause respiratory irritation.

Precautionary Statements: None

Description of other hazards: None

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonym	CAS#	%	GHS-US CLASSIFICATION
Aluminum oxide (Al ₂ O ₃)	Alumina	1344-28-1	45-60	Not classified
Sodium bicarbonate (NaHCO ₃)	Bicarbonate of soda	144-55-8	10-20	Not classified
Potassium permanganate (KMnO ₄)	Permanganate of potash	7722-64-7	7-10	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302

Section 4: First-Aid Measures

After skin contact:	Wash with water and soap. Product may leave a stain that will be washed or rubbed away over a period of time (hours to days). If skin irritation or rash occurs seek medical advice or attention.
After eye contact:	Rinse with water for several minutes. Contact an ophthalmologist.
After inhalation:	Provide fresh air. In case of respiratory tract irritation, consult a physician.
After swallowing:	Rinse mouth with water and call a physician immediately.
Most important symptoms/ Effects, acute and delayed	Inhalation - Coughing Skin contact - Irritation and reddening/skin rash Eye contact - Irritation and reddening Ingestion - Abdominal pain, vomiting and diarrhea

Section 5: Fire-Fighting Measures

Suitable extinguishing agents:	Coordinate firefighting measures to the fire surroundings.
Special hazards arising from: the substance or mixture	The material is not combustible. When involved in a fire, the sodium permanganate component may release corrosive fumes. -Contains an oxidizing substance (potassium permanganate). The product is considered to have no oxidizing properties and it should be classified as "not oxidizing" and "Not Division 5.1" following UN Handbook. A test according to UN Handbook 34.4.1 and GHS was performed and confirms this statement. -Explosive dust-air mixtures may form.
Advice for firefighter:	Wear a self-contained breathing apparatus and chemical protective clothing.
Addition Information:	Suppress gases/vapors/mists with water spray jet. Contaminated firefighting water must be collected separately. Do not allow to enter surface water or drains.

Section 6: Accidental Release Measures

Personal precautions:	Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.
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Measures for environmental: precaution	Do not allow to enter into surface water or drains. 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 but will give off sulfur dioxide vapors and should only be used in well-ventilated areas.
Measures for cleaning:	Pick up dry. Take up mechanically. Avoid generation of dust. Treat the recovered material as prescribed in the section on waste disposal.

Section 7: Handling and Storage

Handling:	Avoid generation of dust. Use air conveying (vacuum) for bulk removal. If manual handling is used for transfer (from vessel, bags, boxes, or pails), use mechanical ventilation or other measures to remove airborne dust.
Storage:	Store only in original container. Keep container tightly closed in a cool, well-ventilated place. Protect from water and exposure to contaminated air (gaseous, particulate, and aerosol contaminated), otherwise the product may be rendered useless.

Section 8: Exposure Controls/Personal Protection

Aluminum oxide (1344-28-1)

OSHA	OSHA PEL (TWA) (mg/m3)	15 mg/m3 (total dust) 5 mg/m3 (respirable fraction)
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Appropriate engineering controls:	If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.
Protective and hygiene measures:	Remove contaminated, saturated clothing immediately. After work, wash hands and face. When using, do not eat or drink.
Eye and face protection:	Tightly fitting safety glasses with side shields.
Hand protection:	Protect skin by using skin protective cream. Wear suitable gloves. Suitable material: NR (natural rubber (India rubber, caoutchouc), natural latex). Thickness of glove material: ≥ 0.1 mm. Penetration time (maximum wearing period): >480 Min. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Skin protection:	Full cover clothing covering arms and legs.

Respiratory protection: In exceptional situations (e.g., accidental release of substances, occupational exposure limit is exceeded) the wearing of respiratory protection is required. Observe the wear time limits. Dust mask: NIOSH N95; identification color: white

Section 9: Physical and Chemical Properties

Physical state (appearance): Solid, roughly spherical pellets or granules, 1/16 - 1/4" (1.6 – 6.4 mm) in diameter

Color Pink to purple

Odor No specific odor

Odor threshold NA

pH ca. 6.5

Changes in the physical state:

Melting point/freezing point No data available

Initial boiling point and boiling Range No data available

Flash point No data available

Evaporation rate No data available

Flammability:

Solid No data available

Upper/lower flammability No data available

Explosive properties:

Lower explosion limit No data available

Upper explosion limit No data available

Ignition temperature No data available

Auto-ignition temperature:

Solid No data available

Decomposition temperature:

No data available

Oxidizing properties:

The product is considered to have no oxidizing properties and it should be classified as "not oxidizing" and "Not Division 5.1" following UN Handbook. A test according to UN Handbook 34.4.1 and GHS was performed and confirms this statement.

Vapor pressure No data available

Vapor density No data available

Relative density ca. 50 lb/ft³, 0.8000 g/cc, 800 kg/m³

Water Solubility Partially soluble

Solubility in other solvents:

Soluble in Concentrated acids, alkalis

Partition coefficient

n-octanol/water No data available

Viscosity, dynamic No data available

Viscosity, kinematic No data available

Section 10: Stability and Reactivity

Reactivity:	No dangerous reactivity under normal conditions.
Chemical stability:	The product is stable under regular conditions.
Possibility of hazardous reactions:	May occur in contact with acids, strong oxidizing agents.
Conditions to avoid:	Liquid water, moisture. Heat sources, open flames and other ignition sources.
Incompatible materials:	Acids, strong oxidizing agents.
Hazardous decomposition products:	Sodium permanganate may liberate corrosive fumes if involved in a fire. Carbon monoxide and carbon dioxide may be generated during combustion of this material.

Section 11: Toxicological Information

Aluminum oxide (1344-28-1)

LD50 oral rat	> 5,000 mg/kg
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Potassium permanganate (7722-64-7)

LD50 oral rat	750 mg/kg
ATE US (oral)	750.000 mg/kg bodyweight

Sodium bicarbonate (144-55-8)

LD50 oral rat	4,220 mg/kg
ATE US (oral)	4,220.000 mg/kg bodyweight

Acute toxicity:	Based on available data, the classification criteria are not met.
Irritation and corrosivity:	Causes serious eye irritation. Causes skin irritation. The classification was made based on available test data. The test item is considered non-corrosive (Corrositex-Test following OECD Guideline 435). The in vitro experiment (OECD Guideline 439 - EPISKIN model) reveals, that the product is an irritant (GHS: Skin Irrit. 2). For skin irritant substances it can be assumed that they also cause eye irritation (GHS: Eye Irrit. 2A).
Sensitizing effects:	Based on available data, the classification criteria are not met.
STOT-single exposure:	Based on available data, the classification criteria are not met.
Severe effects after repeated: Or prolonged exposure	Based on available data, the classification criteria are not met.
Carcinogenic/mutagenic/ toxic effects for reproduction	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.

Section 12: Ecological Information (non-mandatory)

Toxicity:

Acute Daphnia toxicity EC50: <1,0 mg/L (Exposure time 48h; Species: Daphnia magna) OECD Guideline 202

Algae toxicity ErC50: 10-100 mg/L (Exposure time 72h; Species: Desmodesmus subspicatus) OECD Guideline 201

Mobility:

No data available

Bioaccumulation:

No data available

PBT and vPvB assessment:

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

Section 13: Disposal Considerations (non-mandatory)

Disposal advice:

Waste disposal should be in accordance with existing federal, state, and local environmental control regulations. Spent media that has removed toxic chemicals should be examined for specific hazards. Spilled 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.

Disposal of residues/unused products:

Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to an approved waste disposal plant. Avoid release to the environment.

Disposal of packaging:

Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to an approved waste disposal plant. Avoid release to the environment.

Section 14: Transport Information (non-mandatory)

Land transport (DOT)

UN number : None on finished product.

UN proper shipping name : Not regulated.

Transport hazard classes : None on finished product.

Packing group: None on finished product.

Marine pollutant: No

Water transport (IMDG / IMO)

UN number : None on finished product.

UN proper shipping name : Not regulated.

Transport hazard classes : None on finished product.
 Packing group: None on finished product.
 Marine pollutant: No

Air transport (IATA / ICAO)

UN number : None on finished product.
 UN proper shipping name : Not regulated.
 Transport hazard classes : None on finished product.
 Packing group: None on finished product.
 Marine pollutant: No

Environmental hazards

Environmentally hazardous No

Special precautions: No special precautions known.

Section 15: Regulatory Information (non-mandatory)

US Federal regulations:

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.
 Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Aluminum oxide (1344-28-1)

Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 % (fibrous forms)

Potassium permanganate (7722-64-7)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
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International regulations:

Canada:

Aluminum oxide (1344-28-1)

Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Potassium permanganate (7722-64-7)

Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class C - Oxidizing Material Class E - Corrosive Material

Sodium bicarbonate (144-55-8)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
EU-Regulations:	
Aluminum oxide (1344-28-1)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Potassium permanganate (7722-64-7)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Sodium bicarbonate (144-55-8)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
National regulations:	
Aluminum oxide (1344-28-1)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Canadian IDL (Ingredient Disclosure List)	
Potassium permanganate (7722-64-7)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on the Canadian IDL (Ingredient Disclosure List) Listed on INSQ (Mexican national Inventory of Chemical Substances) Listed on Turkish inventory of chemical	
Sodium bicarbonate (144-55-8)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	

US State regulations:

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

Section 16: Other Information

Abbreviations and acronyms

ACGIH: American Conference Of Governmental Industrial Hygienists

ATE: acute toxicity estimate

CAS: Chemical Abstracts Service

CLP: Classification, Labeling, Packaging

DOT: United States Department of Transportation

DNEL: Derived No Effect Level

EC50: median effective concentration for immobilization

ErC50: effective concentration of a substance that causes 50% reduction in growth rate

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Code for Dangerous Goods

IMO: International Maritime Organization

LC50: Lethal concentration, 50% of test population

OECD: Organization for Economic Co-operation and Development

LD50: Lethal dose, 50% of test population

PNEC: Predicted No Effect Concentration

STOT: Specific Target Organ Toxicity

TLV: Threshold Limiting Value

TWA-TLV: Threshold Limit Value for the Time Weighted Average 8 hour day (ACGIH Standard)

SDS date of preparation/update: 1/15/23