



SAFETY DATA SHEET

Version: 2.1 Date: March 20, 2024

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878, and United States Regulation 29 CFR 1910

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<p>1.1 Product identifier Product Name Product Code</p>	<p>PureAir 4, PureAir 8, PureAir 12 PA4-8-12</p>
<p>1.2 Relevant identified uses of the substance or mixture and uses advised against Identified Use(s) Uses Advised Against</p>	<p>Gas-phase air filtration Do not use for applications other than those specified.</p>
<p>1.3 Details of the supplier of the safety data sheet Company Identification</p>	<p>Pure Air Filtration, LLC 6050 Peachtree Parkway Suite 240-187 Atlanta, GA 30092 USA</p> <p>PureAir Filtration BV Tijnmuiden 79 1046 AK Amsterdam The Netherlands</p>
<p>Telephone</p> <p>Fax</p> <p>E-mail (competent person)</p>	<p>+1 (678) 935-1431; Office Hours are Monday through Friday, 8:00AM to 5:00PM Eastern Standard Time</p> <p>+1 (678) 935-0648 ajameson@pureairfiltration.com</p>
<p>1.4 Emergency telephone number Emergency Phone No.</p> <p>Language(s) spoken:</p>	<p>CHEMTREC (international): +1 703-741-5970 (24 hour line) The line is available 24 hours; in the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.</p> <p>English</p>

SECTION 2: HAZARDS IDENTIFICATION

<p>2.1 Classification of the substance or mixture Regulation (EC) No. 1272/2008 (CLP)</p>	<p>Skin Irrit. 2 H315 Eye Irrit. 2A H319</p>
<p>2.2 Label elements Product Name Contains:</p>	<p>According to Regulation (EC) No. 1272/2008 (CLP) PureAir 4, PureAir 8, PureAir 12 Aluminum oxide, water, potassium permanganate proprietary blend</p>

Hazard Pictogram(s)



Signal Word(s)

Warning

Hazard Statement(s)

H315: Causes skin irritation
H319: Causes eye irritation

Precautionary Statement(s)

P264: Wash hands thoroughly after handling
P280: Wear protective gloves and eye/face protection.
P303+P361+P353: IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Immediately call a doctor.
P337+P313: If eye irritation occurs: Immediately call a doctor.
P362: Take off contaminated clothing and wash before reuse

Supplemental information

Not applicable.

2.3 Other hazards

May cause respiratory irritation.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name and Synonyms: Permanganate Impregnated Alumina
Formula: Potassium permanganate impregnant (4%-12%) on aluminum oxide (66%-70%)
Proprietary ingredient: less than 10%
Chemical Family: Inorganic mixture

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Aluminum oxide	66-70	1344-28-1	215-691-6	01-2119529248-35-xxxx	Not classified
Potassium permanganate	4 - 12	7722-64-7	231-760-3	01-2119480139-34-xxx	Ox. Sol. 2; H272 Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 Repr. 2; H361d Aquatic Acute 1; H400; Aquatic Chronic 1; H410

Note: For full text of H phrases see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear suitable protective clothing and gloves. Avoid contact with skin, eyes or clothing. Do not breathe dust. Do not ingest. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. If swallowed then seek immediate medical assistance.

Inhalation

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor.

Skin Contact

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Gently wash with plenty of soap and water. Call a POISON CENTER/doctor.

Eye Contact

IF IN EYES: Flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. After rinsing affected eyes must be seen by an ophthalmologist Call a POISON CENTER/doctor.

Ingestion

IF SWALLOWED: Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin rashes and eye irritation and reddening.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to a physician:

Treat symptomatically.

IF IN EYES: Obtain prompt consultation, preferably from an ophthalmologist.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media

As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or water spray. Alcohol resistant foams (ATC type) are preferred.

Unsuitable extinguishing media

Do not use water jet. Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture

The material is not combustible.

Oxidizer Characteristics

May form explosive dust/air mixtures. May decompose if heated. Not flammable but dust may support combustion.

Contains an oxidizing substance (potassium permanganate). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide.

5.3 Advice for fire-fighters

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Do not allow run-off from fire-fighting to enter drains or water courses. All contaminated wastewater must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments.



SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**

Small spillages:
Oxidizer Characteristics

Ensure operatives are trained to minimize exposures. Ensure suitable personal protection during removal of spillages. Use personal protective equipment as required. See Section: 8. Wear suitable protective clothing, gloves and eye/face protection. Avoid all contact. Avoid dust formation. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. In case of leakage, eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid exposure. Clean up spill immediately.

Contains an oxidizing substance (potassium permanganate). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide.
- 6.2 Environmental precautions**

Collect spillage. Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.
- 6.3 Methods and material for containment and cleaning up**

Small spillages:

Do not mix with combustible material. Provided it is safe to do so, isolate the source of the leak. Dry sweeping is not recommended. If necessary, light water spray will reduce dust for dry sweeping, but over-wetting may produce very slippery walking surfaces. Transfer to a container for disposal. Use vacuum equipment for collecting spilt materials, where practicable. Dispose of this material and its container as hazardous waste.

Sweep up spilled substance and remove to safe place. Do not use saw dust. Avoid dust generation.

Damp down to avoid dust generation.
- 6.4 Reference to other sections**

See Also Section: 8, 13

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**

Oxidizer Characteristics

Ensure operatives are trained to minimize exposures. Use personal protective equipment as required. See Section: 8. Wear suitable protective clothing, gloves and eye/face protection. Avoid all contact. Ensure adequate ventilation. In case of inadequate ventilation wear respiratory protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

Contains an oxidizing substance (potassium permanganate). Do not store near combustible materials. Do not mix with combustible material. Take precautionary measures against static discharge.
- 7.2 Conditions for safe storage, including any incompatibilities**

Storage temperature

Incompatible materials

Keep container tightly closed. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Control dust formation.

Keep only in the original container/package in a cool well-ventilated place. Should be stored inside, away from rainwater, etc.

Protect from moisture. Keep away from strong oxidizing substances.
- 7.3 Specific end use(s)**

See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**

 - 8.1.1 Occupational Exposure Limits**

Ireland HSA (Code of Practice) recommends the following limits for dusts: 10 mg/m³ (8hr TWA) total inhalable dust; 4 mg/m³ (8hr TWA) total respirable dust

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Aluminum oxides	1344-28-1		10 (1) 4 (2)			(1) (2)

(1) Inhalable Dust
(2) Respirable Dust

Source: Health and Safety Authority, Code of Practice, 2020

8.1.2 Biological limit value	None Known
8.1.3 PNECs and DNELs	Not applicable.
8.2 Exposure controls	
8.2.1 Appropriate engineering controls	Ensure operatives are trained to minimize exposures. Ensure adequate ventilation. In case of inadequate ventilation wear respiratory protection. Good hygiene practices and housekeeping measures. A washing facility/water for eye and skin cleaning purposes should be present. Preferably use engineering controls to keep exposures below the OEL or DNEL.
8.2.2 Individual protection measures, such as personal protective equipment (PPE)	Use personal protective equipment as required. Wear suitable protective clothing, gloves and eye/face protection. Keep good industrial hygiene. Do not breathe dust. Avoid all contact. Wash hands before breaks and after work. Keep work clothes separately. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke at the work place.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Use eye protection according to EN 166, designed to protect against dusts. Small Quantities: Not normally required.

Skin protection



Hand protection:
Wear gloves to EN374 to protect against skin effects from powders. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Skin protection: Wear suitable coveralls to prevent exposure to the skin.

Respiratory protection



Respiratory protective device with a particles filter

Thermal hazards

Exothermic reaction with: Reducing agent. Wear a Heat Protective Suit.

8.2.3 Environmental Exposure Controls	Prevent release to the environment.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical state	Solid Pellets
Colour	Purple
Odor	No odor
Melting point/freezing point	Not applicable.
Boiling point or initial boiling point and boiling range	Not applicable.
Flammability	Not flammable
Lower and upper explosion limit	Not explosive
Flash point	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
pH	Not applicable.
Kinematic viscosity	Not applicable.
Solubility	Partly soluble in water.
Partition coefficient: n-octanol/water (log value)	Not applicable.



Vapor pressure	Not applicable.
Density and/or relative density	No data available
Relative vapor density	Not applicable.
Particle characteristics	Median Particle Diameter 4mm

9.2 Other information
 Oxidizing properties Contains an oxidizing substance (potassium permanganate).
 Bulk density 720 – 960 kg/m³ (45 – 60 lb/cuft)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions
10.2 Chemical stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	May occur in contact with acids, strong oxidizing agents, reducing agents.
10.4 Conditions to avoid	Protect from moisture, heat sources, open flames, and other ignition sources.
10.5 Incompatible materials	Acids. Strong reducing and oxidizing agents. Combustible materials.
10.6 Hazardous decomposition product(s)	Potassium Oxide, Manganese, oxides of manganese.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
Acute toxicity - Ingestion	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 > 2000 mg/kg bw/day
Acute toxicity - Inhalation	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LC50 > 20 ml/l
Acute toxicity - Skin Contact	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 > 2000 mg/kg bw/day
Skin corrosion/irritation	Skin. Irrit. H315
Serious eye damage/irritation	Eye Irrit. H319
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not relevant – solid mixture
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties	No substances identified as having endocrine-disrupting properties.
11.2.2 Other information	No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Contains potassium permanganate toxic to aquatic life. Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects. Estimated LC50 (Mixture): Short Term (acute) > 0.1 – ≤ 1 mg/L Long term (chronic) > 0.1 – ≤ 1 mg/L EC50(48h) 0.06 mg/L (Daphnia magna) (EU Method C.2) EbC50: (72h) 0.43 mg/L (Algae)(EU Method C.3) Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects. Harmonized Classification M-factor: 10 No experimental data available.
12.2 Persistence and degradability	No data for the mixture as a whole. Potassium permanganate Testing can be waived because the substance is an inorganic compound.



12.3	Bioaccumulative potential	No data for the mixture as a whole. Potassium permanganate Testing can be waived because the substance is an inorganic compound.
12.4	Mobility in soil	No data for the mixture as a whole. Potassium permanganate Testing can be waived because the substance is an inorganic compound.
12.5	Results of PBT and vPvB assessment	The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
12.6	Endocrine disrupting properties	No substances identified as having endocrine-disrupting properties.
12.7	Other adverse effects	None Known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Waste disposal should be in accordance with existing federal, state, and local environmental control regulations. Avoid release to the environment.
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*Note that this is for the unused product. Used product is a nonhazardous salt. See MSDS for used product.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA/ICAO	US DOT 49 CFR 172.101
14.1	UN number or ID number	Not regulated	Not regulated	Not regulated
14.2	UN proper shipping name	Not assigned	Not assigned	Not assigned
14.3	Transport hazard class(es)	None	None	None
14.4	Packing group	None	None	None
14.5	Environmental hazards	No	No	No
14.6	Special precautions for user	None Known	None Known	None Known
14.7	Maritime transport in bulk according to IMO	None Known	None Known	None Known
14.8	Additional Information	Not applicable		

SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1	EU regulations Authorizations and/or Restrictions On Use CoRAP Substance Evaluation	Not restricted for the intended use(s) of the product. Substance identified for evaluation in 2017 evaluating Member State has concluded that no additional information is required
15.1.2	National regulations Germany United States	Permanganate: Water hazard class: 3 National Inventory TSCA- All components are listed under the TSCA 8 b inventory as active or exempted. No components are listed under TSCA 12 b RA Section 304 CERCLA Potassium Permanganate reportable quantity 100 lbs (45.4 kg) RA Section 311/312 Hazards



USA State Regulations

Potassium permanganate : fire hazard, immediate (acute) health hazard, delayed health hazard

RA Section 313 Toxic Release inventory

OSHA 29 CFR 19.10

Air Act Section 112b

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, California)- this product cannot expose you to products know to California to cause cancer or reproductive harm

15.2 Chemical Safety Assessment

A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated substance / mixture classification. Updated version and date. New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References: Existing Safety Data Sheet (SDS) Substance with harmonized classification and labelling according to Regulation (EC) No. 1272/2008, Annex VI. Existing ECHA registration for Potassium permanganate (CAS No. 7722-64-7)

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Classification of the substance or mixture according to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Ox. Sol. 2: H272	Expert judgement
Skin Irrit 2: H315	Calculation method
Skin Corr. 1C: H314	Calculation method
Eye Dam. 1: H318	Calculation method
Eye Irrit. 2A: H319	Calculation method
Repr. 2: H361d	Calculation method
Aquatic Acute 1: H400	Summation Calculation
Aquatic Chronic 1: H410	Summation Calculation

LEGEND

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
- CoRAP: Community Rolling Action Plan (CoRAP)
- DNEL: Derived no effect level
- EC50: Half maximal effective concentration
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Dangerous Goods
- LC50: Lethal concentration at which 50% of the population is killed
- LD50: Lethal dose at which 50% of the population is killed
- LTEL: Long term exposure limit
- OEL: Occupational exposure limits
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No Effect Concentration
- REACH: Registration, Evaluation, Authorization and Restriction of Chemicals
- RID: Regulations concerning the international railway transport of dangerous goods
- STEL: Short term exposure limit
- vPvB: very Persistent and very Bioaccumulative



Hazard classification / Classification code:

Ox. Sol. 2; Oxidizing solid, Category 2
Acute Tox. 4; Acute Toxicity, Category 4
Skin Irrit. 2; Skin irritant, Category 2
Eye Irrit. 2A; Eye irritation, Category 2A
Skin corrosion/irritation, Category 1C
Eye Dam. 1; Eye damage, category 1
Repr. 2; Reproductive toxicity, Category 2
STOT RE 2; Specific target organ toxicity —
repeated exposure, Category 2

Aquatic Acute 1; Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1; Hazardous to the aquatic environment,
Chronic, Category 1

Hazard Statement(s)

H272: May intensify fire; oxidizer.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes eye irritation.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H361d: Suspected of damaging the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Disclaimers

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