



SAFETY DATA SHEET

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

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

- 1.1 Product identifier
 Product Name Sulphasorb2
 Product Code S2
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
 Identified Use(s) Gas-phase air filtration
 Uses Advised Against Do not use for applications other than those specified.
- 1.3 Details of the supplier of the safety data sheet
 Company Identification
 Pure Air Filtration, LLC
 6050 Peachtree Parkway
 Suite 240-187
 Atlanta, GA 30092 USA
 PureAir Filtration BV
 Tijnmuiden 79
 1046 AK Amsterdam
 The Netherlands
 Telephone +1 (678) 935-1431 ; Office Hours are Monday through Friday, 8:00AM to 5:00PM Eastern Standard Time
 Fax +1 (678) 935-0648
 E-mail (competent person) ajameson@pureairfiltration.com
- 1.4 Emergency telephone number
 Emergency Phone No. 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.
 Language(s) spoken: English

2 SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture
 GHS-US and Regulation (EC) No. 1272/2008 (CLP) and most important hazards
 Eye Irrit. 2; h319+H320
 Skin Irrit. 2 h315
 Resp Irrit H335
 Mixture itself in solid form causes little irritation, but if crushed or handled extensively, dust may evolve which can cause irritation to eyes and respiratory tract. Adding water can cause irritation to skin.
 If in a confined space, use appropriate safety precautions, as activated carbon can remove oxygen and cause hazard for workers in small space. Before entering space, check state and national guidelines for work in confined area.
- 2.2 Label elements
 Product Name According to Regulation (EC) No. 1272/2008 (CLP)
 Sulphasorb2
 Contains: Aluminum oxide, water, carbon, sodium hydroxide

Hazard Pictogram(s)



Signal Word(s)

Warning

Hazard Statement(s)
Resp Irrit; H335

Eye Irrit. 2; H319+H320Skin Irrit. 2; H315

Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P220: Keep away from clothing and other combustible materials.
 P235 + P410 - Keep cool. Protect from sunlight
 P260 - Do not breathe dust
 P264 - Wash face, hands and any exposed skin thoroughly after handling

 P273: Avoid release to the environment.
 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.
 P310: Immediately call a doctor.
 P362: Take off contaminated clothing and wash before reuse

Supplemental information

Not applicable.

2.3 Other hazards

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

*NOTE: The Hazard Classification listed in this section refers to the chemical at a pure concentration. It has been determined that the remaining ingredient(s) of this component/product are NOT CLASSIFIED AS HAZARDOUS CHEMICALS due to their physical and/or chemical nature and/or concentration in solution, in accordance with California and Federal OSHA regulations (Federal Register 29CFR 1910.1200), and The Chemicals (Hazard Information and Packaging for Supply) Regulations (European Community).

3 SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Aluminum oxide	35-40%	1344-28-1	215-691-6	01-2119529248-35-XXXX	Not Classified
Carbon	35-40%	7440-44-0	231-153-3	01-2119488894-16-XXXX	Not Classified
Sodium Hydroxide	3-7%	1310-73-2	215-185-5	01-2119457892-27-xxxx	Skin and Eye Dam. 1A; H314 + 318



4 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

Can cause skin and eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Notes to a physician:

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

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

5 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

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

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. Keep containers cool by spraying with water if exposed to fire. Do not allow run-off from firefighting to enter drains or water courses. All contaminated wastewater must be processed in an industrial or municipal wastewater treatment plant.



6 SECTION 6: ACCIDENTAL RELEASE

- 6.1 Personal precautions, protective equipment, and emergency procedures

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.

Small spillages: Clean up spill with measures mentioned above. No extra measures necessary.
- 6.2 Environmental precautions

Collect spillage. Inform authorities if spill cannot be contained.

Methods and material for containment and cleaning up

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.

Small spillages: Sweep up spilled substance and remove to safe place. Avoid dust generation. Damp down to avoid dust generation.
- 6.3 Reference to other sections

See Also Section: 8, 13

7 SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling

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.

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

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

Storage temperature

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

Protect from moisture. Keep away from strong oxidizing substances.

Specific end use(s)

See Section: 1.2

8 SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
 - 8.1.1 Related to Substance- Aluminum Oxide

OSHA PEL (TWA) (15 mg/m³ total dust; 5 mg/m³ respirable fraction)
 - 8.1.2 Related to Substance- Potassium Hydroxide

ACGIH Ceiling (2mg/m³)
 - 8.1.3 Occupational Exposure Limits

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

Dust, or Particulates, Substance Not Otherwise Specified:

- Austria MAK: 10 mg/m³, STEL 2x30 min, Inhalable dust 5 mg/m³, TWA, Inhalable dust
- Belgium: 10 mg/m³, TWA, Inhalable 3 mg/m³ TWA, Respirable
- Canada (Saskatchewan): 10 mg/m³, TWA, Inhalable 3 mg/m³ TWA, Respirable
- China: 8 mg/m³, TWA 10 mg/m³, STEL
- France: 10 mg/m³, TWA Inhalable dust 5 mg/m³, TWA Respirable dust
- Germany - TRGS 900: 10 mg/m³, TWA, Inhalable 3 mg/m³, Respirable fraction Hong Kong: 10 mg/m³, TWA
- Ireland: 10 mg/m³, TWA, Total inhalable 4 mg/m³, TWA, Respirable Italy: 10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
- Japan: 3 mg/m³ TWA, Respirable Product code: CI4 Product name: NORITÒ CI4 Revision date: 29-Jul-2016
- Malaysia: 10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
- The Netherlands: 3.5 mg/m³, Inhalable
- Spain: 10 mg/m³, VLA, Inhalable 3 mg/m³, VLA, Respirable
- Sweden: 10 mg/m³, NGV, Total inhalable 5 mg/m³, NGV, Respirable
- United Kingdom - WEL: 10 mg/m³, TWA, Total Inhalable dust 4 mg/m³, TWA, Respirable dust US ACGIH - PNOS: 10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable US OSHA - PEL: 15 mg/m³, TWA, Total dust 5 mg/m³, TWA, Respirable

- 8.1.0 Biological limit value None Known
- 8.1.1 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 workplace.

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 or Dust Mask: NIOSH N95

8.2.3 Environmental Exposure Controls Prevent release to the environment.

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid cylindrical and spherical pellets
Color	Black and gray
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	8-10.5.
Kinematic viscosity	Not applicable.
Solubility	Partly soluble in water.
Partition coefficient: n-octanol/water (log value)	Not applicable.
Vapor pressure	1 @ 3586C (6487F)
Density and/or relative density	~ 40 lbs./ft3 , 640 kg/m3
Relative vapor density	Not applicable.



Particle characteristics	Median Particle Diameter 4mm
9.2 Other information Oxidizing properties	The final 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.
10 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 with strong acids or oxidizing agents
10.4 Conditions to avoid	Protect from moisture and damage.
10.5 Incompatible materials	Strong acids. Strong oxidizing agents.
10.6 Hazardous decomposition product(s) 12.5% in air).	May produce amounts of carbon monoxide which reach the lower explosive limit (LEL =
11 SECTION 11: TOXICOLOGICAL INFORMATION	
11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
Acute toxicity - Ingestion	Mixture: Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 > 2000 mg/kg bw/day
Acute toxicity - Inhalation	Mixture: Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LC50 > 20 ml/l
Acute toxicity - Skin Contact	Mixture: Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 > 2000 mg/kg bw/day
Skin corrosion/irritation	Mixture: Skin Irr 2
Serious eye damage/irritation	Mixture: Eye. Dam. 1; H318: Causes serious eye damage.
Respiratory or skin sensitization	Mixture: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Mixture: Based on available data, the classification criteria are not met.
Carcinogenicity	Mixture: Based on available data, the classification criteria are not met.
Reproductive toxicity	Mixture: Based on available data, the classification criteria are not met.
STOT - single exposure	Mixture: Based on available data, the classification criteria are not met.
STOT - repeated exposure	Mixture: Based on available data, the classification criteria are not met.
Aspiration hazard	Mixture: 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
12 SECTION 12: ECOLOGICAL INFORMATION	
12.1 Toxicity	No data, but mixture is only partially (very small percentage) soluble in water No experimental data available.
12.2 Persistence and degradability	No data for the mixture as a whole.
12.3 Bioaccumulative potential	No data for the mixture as a whole.
12.4 Mobility in soil	No data for the mixture as a whole.
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



13 SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Dispose of wastes in an approved waste disposal facility, in accordance with local laws
 *Note that this is for the unused product. Used product is a nonhazardous salt. See MSDS for used product.

14 SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA/ICAO	US DOT 49 CFR 172.101
14.1 UN number or ID number	Not Applicable	Not Applicable	Not Applicable	Not Applicable
14.2 UN proper shipping name				
14.3 Transport hazard class(es)				
14.4 Packing group				
14.5 Environmental hazards				
14.6 Special precautions for user				
14.7 Maritime transport in bulk according to IMO instruments				
14.8 Additional Information				

15 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 Not restricted for the intended use(s) of the product.
 CoRAP Substance Evaluation Substance identified for evaluation in 2017 evaluating Member State has concluded that no additional information is required

Listed on EEC Inventory EINECS

15.1.2 National regulations
 Germany
 United States

Possible Water Hazard, unclassified
 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

USA State Regulations Air Act Section 112b; Cal. Proposition 65- no known cancer-causing ingredients

15.2 Chemical Safety Assessment A chemical safety assessment is not required under REACH.



16 SECTION 16: OTHER INFORMATION

Full list of H Statements:

Eye Irrit. 2; H319+H320
 Skin Irrit. 2; H315
 Acute Tox 4; H302
 Resp Irrit; H335
 Acute Tox. 3 (Oral); H301
 Skin and Eye Dam. 1A; H314 + 318

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

LEGEND

- ADR 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 IATA: International Air Transport Association
- ICAO ICAO: International Civil Aviation Organization
- IMDG 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 PBT: Persistent, Bioaccumulative and Toxic
- PNEC Predicted No Effect Concentration
- REACH Registration, Evaluation, Authorization and Restriction of Chemicals
- RID RID: Regulations concerning the international railway transport of dangerous goods STEL Short term exposure limit
- vPvB vPvB: very Persistent and very Bioaccumulative

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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