

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: ≥95% Barium Peroxide

Product Code: BA-PERO-0151-P

CAS Number: 1304-29-6

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements 10884 Weyburn Ave. Los Angeles, CA 90024 Tel: +1 310-208-0551 Fax: +1 310-208-0351 Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture GHS07 Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).



Hazard pictograms GHS07 Signal word Warning Hazard-determining components of labeling: Tris(2,4-pentanedionato)manganese Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements

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P231 Handle under inert gas.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P222 Do not allow contact with air.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,
if present
and easy to do. Continue rinsing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international
regulations.
Classification system:
NFPA ratings (scale 0 - 4)
1
0
0
Health = 1
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
HEALTH
FIRE
REACTIVITY
1
0
0
Health = 1
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances CAS # / Substance Name 14284-89-0 Tris(2,4-pentanedionato)manganese

SECTION 4. FIRST AID MEASURES

Description of first aid measures

If inhaled: In case of unconsciousness place patient stably in side position for transportation. In case of skin contact: Immediately wash with soap and water; rinse thoroughly. In case of eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. If swallowed: If symptoms persist consult doctor. Information for doctor: Most important symptoms and effects, both acute and delayed: No data available Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture No data available Advice for firefighters Protective equipment: No special measures required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: No special measures required.

Methods and materials for containment and cleanup:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling:

Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7. Control parameters Components with limit values that require monitoring at the workplace: Not required. Additional information: The lists that were valid during the creation were used as basis. Exposure controls Personal protective equipment: General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. Protection of hands: SProtective aloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: RTightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance: Form: Powder Color: Whitish Odor: Odorless Odor threshold: No data available. pH: N/A Melting point/Melting range: 172 °C (342 °F) Boiling point/Boiling range: No data available. Flash point: N/A Flammability (solid, gas): Product is not flammable. Ignition temperature: Decomposition temperature: No data available. Autoignition: No data available. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Lower: No data available. Upper: No data available. Vapor pressure: no data hPa Density at 20 °C (68 °F): 4.96 g/cm³ (41.391 lbs/gal) Relative density No data available. Vapor density N/A Evaporation rate N/A Solubility in / Miscibility with Water: Insoluble. Partition coefficient (n-octanol/water): No data available. Viscosity: Dynamic: N/A

Kinematic: N/A Solvent content: Organic solvents: 0.0 % VOC content: 0.0 g/l / 0.00 lb/gl Solids content: 100.0 % Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions No dangerous reactions known. Conditions to avoid No data available Incompatible materials: No data available Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Primary irritant effect: on the skin: Irritant to skin and mucous membranes. on the eye: Irritating effect. Sensitization: No sensitizing effects known. Additional toxicological information: Carcinogenic categories IARC (International Agency for Research on Cancer) Substance is not listed. NTP (National Toxicology Program) Substance is not listed. OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Aquatic toxicity: No data available Persistence and degradability No data available Behavior in environmental systems: Bioaccumulative potential No data available Mobility in soil No data available Additional ecological information: Not known to be hazardous to water. Results of PBT and vPvB assessment PBT: N/A vPvB: N/A Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Recommendation: Must not be disposed of together with household garbage. Do not allow product to enter drains, sewage systems, or other water courses system. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number DOT, IMDG, IATA UN1449 UN proper shipping name DOT, IATA Barium peroxide IMDG BARIUM PEROXIDE Transport hazard class(es) DOT Class 5.1 Oxidizing substances Label 5.1, 6.1 IMDG Class 5.1 Oxidizing substances Label 5.1/6.1 ΙΑΤΑ Class 5.1 Oxidizing substances Label 5.1 (6.1) Packing group DOT, IMDG, IATA II Environmental hazards: Marine pollutant: No Special precautions for user N/A Danger code (Kemler): 56 Segregation groups Peroxides Stowage Category E Handling Code H1 Keep as dry as reasonably practicable Segregation Code SG16 Stow "separated from" class 4.1 SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained. SG35 Stow "separated from" acids. SG59 Stow "separated from" permanganates Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A Transport/Additional information: DOT Quantity limitations On passenger aircraft/rail: 5 kg On cargo aircraft only: 25 kg IMDG Limited quantities (LQ) 1 kg Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g UN "Model Regulation": UN 1449 BARIUM PEROXIDE, 5.1 (6.1), II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture Sara Section 355 (extremely hazardous substances): Substance is not listed. Section 313 (Specific toxic chemical listings): Substance is not listed. TSCA (Toxic Substances Control Act): Substance is listed. **Proposition 65** Chemicals known to cause cancer: Substance is not listed. Chemicals known to cause reproductive toxicity for females: Substance is not listed. Chemicals known to cause reproductive toxicity for males: Substance is not listed. Chemicals known to cause developmental toxicity: Substance is not listed. Carcinogenic categories EPA (Environmental Protection Agency) Substance is not listed. TLV (Threshold Limit Value established by ACGIH) Substance is not listed. NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed. **GHS** label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms GHS07 Signal word Warning Hazard-determining components of labeling: Tris(2,4-pentanedionato)manganese Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P231 Handle under inert gas. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P222 Do not allow contact with air. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.