

SAFETY DATA SHEET

Date Printed: 05/06/2021

Date Revised: 05/15/2015

SECTION 1. IDENTIFICATION

Product Name: Methylammonium Triiodoplumbate(II) Precursor

Product Number: All applicable American Elements product codes, e.g. METHAM-3IPB-01-SOL

CAS #: 69507-98-8

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
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SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture GHS02 Flame Flam. Liq. 3 H226 Flammable liquid and vapor. GHS08 Health hazard Repr. 1A H360 May damage fertility or the unborn child. STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. GHS07 Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled. · Label elements · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictogram



· Signal word Danger · Hazard statements H226 Flammable liquid and vapor. H302+H332 Harmful if swallowed or if inhaled. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. · Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapors/spray P281 Use personal protective equipment as required. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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) Health = 4 Fire = 2 Reactivity = 0 · HMIS-ratings (scale 0 - 4) Health = 4 Fire = 2 Reactivity = 0 · Other hazards · Results of PBT and vPvB assessment · PBT: Not applicable. · vPvB: Not applicable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Substances · CAS No. Description 69507-98-8 Methylammonium triiodoplumbate(II) (40wt% solution in DMF)

SECTION 4. FIRST AID MEASURES

Description of first aid measures · General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. · After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation. · After skin contact: Immediately rinse with water. · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor. · After swallowing: Immediately call a doctor. · Information for doctor: · Most important symptoms and effects, both acute and delayed No further relevant information available · Indication of any immediate medical attention and special treatment needed No further relevant information 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. · For safety reasons unsuitable extinguishing agents: Water with full jet · Special hazards arising from the substance or mixture No further relevant information available. · Advice for firefighters · Protective equipment: Mouth respiratory protective device.

SECTION 6. ACCIDENTAL RELEASE MEASURES

· Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. · Environmental precautions: Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water. · Methods and material for containment and cleaning up: 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 Thorough dedusting. Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. · Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available. · Conditions for safe storage, including any incompatibilities · Storage: · 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. · Specific end use(s) No further relevant information 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. Wash hands before breaks and at the end of work. Store protective clothing separately. · 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: Protective gloves 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: Tightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

· Information on basic physical and chemical properties · General Information · Appearance: Form: Liquid Color: Yellow · Odor: undistinguishable · Odor threshold: Not determined. · pH-value: Not applicable. · Change in condition Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined. · Flash point: 60 °C (140 °F) · Flammability (solid, gaseous): Flammable. · Ignition temperature: Decomposition temperature: Not determined. · Auto igniting: Not determined. · Danger of explosion: Not determined. · Explosion limits: Lower: Not determined. Upper: Not determined. · Vapor pressure: Not applicable. · Density at 20 °C (68 °F): 1.368 g/cm³ (11.416 lbs/gal) · Relative density Not determined. · Vapor density Not applicable. · Evaporation rate Not applicable. · Solubility in / Miscibility with Water: Insoluble. · Partition coefficient (n-octanol/water): Not determined. · Viscosity: Dynamic: Not applicable. Kinematic: Not applicable. · Solvent content: Organic solvents: 0.0 % VOC content: 0.0 g/l / 0.00 lb/gl Solids content: 100.0 % · Other information No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

· Reactivity No further relevant information 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 further relevant information available. · Incompatible materials: No further relevant information 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: No irritant effect. · on the eye: No 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 further relevant information available. · Persistence and degradability No further relevant information available. · Behavior in environmental systems: · Bioaccumulative potential No further relevant information available. · Mobility in soil No further relevant information available. · Additional ecological information: · General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground

water, water course or sewage system. · Results of PBT and vPvB assessment · PBT: Not applicable.
· vPvB: Not applicable. · Other adverse effects No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

· Waste treatment methods · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. · Uncleaned packagings: · Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

· UN-Number · DOT, IMDG, IATA UN2929 · UN proper shipping name · DOT, IATA Toxic liquids, flammable, organic, n.o.s. · IMDG TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. · Transport hazard class(es) · DOT · Class 6.1 Toxic substances · Label 6.1, 3 · IMDG · Class 6 · Label 6.1/3 · IATA · Class 6.1 Toxic substances · Label 6.1 (3) · Packing group · DOT, IMDG, IATA I · Environmental hazards: Not applicable. · Special precautions for user Not applicable. · EMS Number: F-E,S-D · Stowage Category B · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: · DOT · Quantity limitations On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L · IMDG · Limited quantities (LQ) 0 · Excepted quantities (EQ) Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g · UN "Model Regulation": UN 2929 TOXIC LIQUIDS, FLAMMABLE, ORGANIC, N.O.S., 6.1 (3), I

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 not 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 GHS02 GHS07 GHS08 · Signal word Danger · Hazard statements H226 Flammable liquid and vapor. H302+H332 Harmful if swallowed or if inhaled. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. · Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapors/spray P281 Use personal protective equipment as required. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. · National regulations: · Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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 1997-2021 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.