

SAFETY DATA SHEET

Date Printed: 05/15/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (2N) 99% Copper Phthalocyanine

Product Code: CU-PCIN-02-P

CAS Number: 147-14-8

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 Not a hazardous substance or mixture. GHS Label elements, including precautionary statements Not a hazardous substance or mixture. Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances Synonyms : Phthalocyanine blue Pigment Blue 15 CuPc Formula : C32H16CuN8 Molecular weight : 576.07 g/mol CAS-No. : 147-14-8 EC-No. : 205-685-1

SECTION 4. FIRST AID MEASURES

Description of first aid measures If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of skin contact Wash off with soap and plenty of water. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2 and/or in section 11 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx), Copper oxides Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Further information No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8. Environmental precautions No special environmental precautions required. Methods and materials for containment and cleaning up Sweep up and shovel. Keep in suitable, closed containers for disposal. Reference to other sections For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2. Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place. Storage class (TRGS 510): 13: Non Combustible Solids

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls Appropriate engineering controls General industrial hygiene practice. Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. **Body Protection** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure

No special environmental precautions required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- a) Appearance Form: powder
- b) Odour odourless
- c) Odour Threshold No data available
- d) pH No data available
- e) Melting point/freezing point

350 °C (662 °F)

f) Initial boiling point and boiling range

No data available

- g) Flash point ()No data available
- h) Evaporation rate No data available
- i) Flammability (solid, gas)
- No data available
- j) Upper/lower flammability or explosive limits
- No data available
- k) Vapour pressure < 0.0001 hPa at 20 °C (68 °F)
- I) Vapour density No data available
- m) Relative density No data available
- n) Water solubility No data available

o) Partition coefficient: n-octanol/water No data available
p) Auto-ignition temperature
356 °C (673 °F) at 1,013 hPa
q) Decomposition temperature
No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
Other safety information
Solubility in other solvents
Ethanol - insoluble

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions No data available Conditions to avoid No data available Incompatible materials Strong oxidizing agents Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Copper oxides Other decomposition products - No data available In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity LD50 Oral - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 401) Inhalation: No data available LD50 Dermal - Rat - male - > 5,000 mg/kg (OECD Test Guideline 402) No data available Skin corrosion/irritation Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - Rabbit Result: No eye irritation - 24 h (OECD Test Guideline 405) Respiratory or skin sensitisation Maximisation Test - Guinea pig

Result: Does not cause skin sensitisation. (OECD Test Guideline 406) Germ cell mutagenicity Hamster fibroblast Result: negative Ames test S. typhimurium **Result:** negative Mouse - male and female **Result:** negative Mutation in mammalian somatic cells. Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. Reproductive toxicity No data available No data available Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available Additional Information Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level -1,000 mg/kg RTECS: GL8510000

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Toxicity to fish mortality LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203) mortality LC50 - Cyprinus carpio (Carp) - > 100 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l -48 h (Directive 67/548/EEC, Annex V, C.2.) Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - > 10,000 mg/l - 3h (OECD Test Guideline 209) Persistence and degradability Biodegradability aerobic - Exposure time 28 d Result: 5 % - Not biodegradable (OECD Test Guideline 301C) Bioaccumulative potential No data available Mobility in soil No data available Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards No SARA Hazards Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act. Pennsylvania Right To Know Components 29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper CAS-No. 147-14-8 Revision Date 2015-07-08 New Jersey Right To Know Components 29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper CAS-No. 147-14-8 Revision Date 2015-07-08 California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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.