SECTION 1 — Identification of the Substance and Company

Product name	Carmoisine (Azorubine, Food Red 3, E122, Acid Red 14)
Catalogue number	ASD-637
CAS Number	3567-69-9
E Number / C.I.	E122 / CI 14720
Intended use	Food-grade synthetic colourant for food, beverage, pharmaceutical, cosmetic, and laboratory applications where permitted. For professional/industrial use.
Supplier	AuSaMicS Pty Ltd
Address	31 Longview CT, Thomastown VIC 3074, Australia
ABN	56 676 640 467
Phone / Email	+61 412 520 598 | support@ausamics.com
Website	www.ausamics.com.au
Emergency contact	Poisons Information Centre: 13 11 26 (Australia, 24 hours)

SECTION 2 — Hazard Identification

GHS Classification: Not classified as a hazardous substance or dangerous good under Australian WHS Regulations (Safe Work Australia) or the GHS (7th Revised Edition).

- Signal Word: None required
- Hazard Pictograms: None applicable
- Hazard Statements: None applicable
- Precautionary Statements: Avoid inhalation of dust. Use standard laboratory PPE. Wash hands after handling.
- Environmental note: Azo dyes may cause visible discolouration of waterways — avoid large-scale release to drains.

SECTION 3 — Composition / Information on Ingredients

Component	CAS Number	Concentration	GHS Classification
Carmoisine disodium salt (Acid Red 14)	3567-69-9	>= 86%	Not classified
Sodium sulfate (counterion / minor impurity)	7757-82-6	<= 14%	Not classified
Water (moisture)	7732-18-5	<= 13%	Not classified

SECTION 4 — First Aid Measures

Route of Exposure	First Aid Action
Inhalation	Remove to fresh air. If respiratory irritation persists, seek medical attention.
Skin contact	Wash affected area thoroughly with soap and water. Remove contaminated clothing. Note: dye may cause temporary skin staining. Seek medical advice if irritation persists.

Route of Exposure	First Aid Action
Eye contact	Flush eyes immediately with copious water for at least 15 minutes, lifting upper and lower eyelids. Seek medical attention if irritation persists.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Seek medical attention if symptomatic. Show this SDS to attending physician.

SECTION 5 — Fire-Fighting Measures

- Not flammable under normal conditions of use.
- Suitable extinguishing media: Use agents appropriate for surrounding fire (CO2, dry chemical, foam, water spray).
- Hazardous combustion products: Carbon dioxide (CO2), carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx) upon combustion.
- Protective equipment: Self-contained breathing apparatus (SCBA) for confined-space fire fighting.

SECTION 6 — Accidental Release Measures

- Personal precautions: Wear appropriate PPE (gloves, eye protection, dust mask). Avoid dust generation and skin/eye contact.
- Environmental precautions: Avoid release to drains, waterways, or soil. Carmoisine is a persistent azo dye that causes visible discolouration at very low concentrations. Contain spills immediately.
- Spill clean-up (powder): Carefully sweep or vacuum to avoid dust generation. Collect in a sealed, labelled container for disposal. Avoid dry sweeping where possible — use damp cloth or HEPA vacuum.
- Spill clean-up (solution): Absorb with inert material (sand, vermiculite). Collect and dispose per Section 13.

SECTION 7 — Handling and Storage

Handling:

- Handle in a well-ventilated laboratory or industrial environment.
- Avoid inhalation of powder dust during weighing and handling.
- Wear appropriate PPE: nitrile gloves, safety spectacles, laboratory coat.
- Carmoisine will stain skin, clothing, and surfaces intensely — take precautions to avoid contact.
- Wash hands and any exposed skin thoroughly after handling.
- Do not eat, drink, or smoke in areas where this product is handled.

Storage:

- Store at 15–25°C in a cool, dry location away from direct sunlight, heat, and moisture.
- Keep container tightly sealed when not in use.
- Do not store near strong oxidising agents, strong reducing agents, or bleaching agents (azo dyes are susceptible to reductive or oxidative decolouration).
- Shelf life: up to 3 years from date of manufacture under recommended conditions.

SECTION 8 — Exposure Controls / Personal Protection

PPE / Control Type	Recommendation
Respiratory protection	Not required under normal conditions. P1/P2 dust mask recommended if handling large quantities of powder or if LEV is inadequate.
Hand protection	Nitrile gloves (0.1 mm minimum thickness). Note: Carmoisine will stain skin and most glove materials — replace gloves immediately if contaminated or damaged.

PPE / Control Type	Recommendation
Eye protection	Safety spectacles or chemical splash goggles. Avoid any contact — dye causes persistent eye staining.
Body protection	Laboratory coat or coveralls; closed-toe shoes. Wash contaminated clothing separately before reuse — dye may not wash out fully.
Engineering controls	Handle in well-ventilated area. Local exhaust ventilation (LEV) recommended when weighing or handling powder in quantity.
Occupational exposure limits	No specific WES established under Australian WHS Regulations. Apply general laboratory inhalable dust limits (inhalable: 10 mg/m3; respirable: 3 mg/m3).

SECTION 9 — Physical and Chemical Properties

Property	Value
Physical form	Powder (dehydrated)
Colour	Dark red to maroon
Odour	Odourless
Molecular formula	C20H12N2Na2O7S2
Molecular weight	502.43 g/mol
Solubility	Freely soluble in water; very slightly soluble in ethanol
Absorption maximum	~516 nm (aqueous solution)
Melting point	>300°C (decomposes)
pH stability	Stable pH 3–9 (colour may shift outside this range)
Flammability	Not flammable
Explosive properties	Not explosive
Oxidising properties	Not oxidising

SECTION 10 — Stability and Reactivity

- Chemical stability: Stable under recommended storage conditions (15–25°C, dry, sealed, away from light).
- Conditions to avoid: Strong UV/visible light (causes photodegradation and colour fading), excessive heat, high humidity and moisture.
- Incompatible materials: Strong oxidising agents (e.g. bleach, chlorine, hydrogen peroxide, permanganate) and strong reducing agents cause decolouration/degradation. Avoid strong acids and alkalis.
- Hazardous decomposition products: CO2, CO, NOx, SOx upon thermal decomposition.
- Hazardous reactions: None known under normal conditions of use.

SECTION 11 — Toxicological Information

- Acute toxicity (oral): Low acute oral toxicity based on EFSA 2009 review. LD50 data not established at food-use levels.
- Skin irritation: Not expected to cause significant irritation; however, may cause persistent skin staining.
- Eye irritation: May cause mechanical irritation; dye causes intense, persistent staining of conjunctiva — flush immediately.
- Respiratory effects: Powder dust may irritate mucous membranes. Avoid inhalation.

- Sensitisation: Some individuals may develop hypersensitivity reactions to azo dyes, particularly those with aspirin sensitivity. Use with appropriate precaution in consumer-facing applications.
- Carcinogenicity: No sufficient evidence of carcinogenicity in humans at food-use levels — EFSA 2009 review concluded acceptable daily intake (ADI) of 0–4 mg/kg body weight.
- Mutagenicity / reproductive toxicity: No evidence of mutagenic or reproductive toxic effects at levels approved for food use.

SECTION 12 — Ecological Information

- Aquatic toxicity: Azo dyes are moderately toxic to aquatic organisms at elevated concentrations. Carmoisine causes visible and persistent discolouration of water at very low concentrations (visible at <1 mg/L).
- Persistence and degradability: Azo dyes are generally resistant to aerobic biodegradation but may degrade under anaerobic conditions or via photolysis. Not readily biodegradable.
- Bioaccumulation potential: Low bioaccumulation potential — ionic, high MW compound with poor membrane permeability.
- Environmental precautions: Avoid discharge to drains, waterways, or soil. Even trace amounts cause visible water discolouration. Notify relevant authorities in case of significant spill to environment.

SECTION 13 — Disposal Considerations

- Small quantities: Dispose as non-hazardous solid waste in accordance with local council and State EPA regulations (VIC: EPA Victoria, Publication 448).
- Do not discharge concentrated solutions or large quantities to drains — causes persistent visible discolouration and may affect waterway aesthetics.
- Solutions should be diluted and/or treated with reducing agents (e.g. sodium dithionite) or oxidising agents (e.g. ozone, advanced oxidation) prior to drain discharge in larger volumes.
- Contaminated containers: Empty, rinse thoroughly, allow rinse to drain under running water, and dispose as non-hazardous waste.

SECTION 14 — Transport Information

Classification System	Status
ADG (Australian Dangerous Goods)	Not classified as a dangerous good
IATA (Air transport)	Not classified as a dangerous good
IMDG (Sea transport)	Not classified as a dangerous good
UN Number	Not applicable
Special transport precautions	Store upright; protect from moisture and heat during transport. Note: any leakage will cause intense staining of surfaces and packaging.

SECTION 15 — Regulatory Information

- Classified and labelled in accordance with the Globally Harmonized System (GHS), 7th Revised Edition, and Australian WHS Regulations (Safe Work Australia, Model WHS Regulations 2011).
- Permitted food colourant in Australia and New Zealand under FSANZ Food Standards Code, Standard 1.3.1 — subject to maximum permitted levels (MPL) per food category.
- Approved as E122 (Carmoisine/Azorubine) under EU food additive regulations — subject to MPLs per EU Regulation (EC) No 1333/2008.
- Not approved for food use in the United States (FDA).
- HS / AHECC Code: 3204.19.00 — Synthetic organic colouring matter.
- Consult local regulatory authorities and applicable food law before use in consumer products.

SECTION 16 — Other Information

SDS Document Number	SDS-ASD-637-CARM
GHS Revision	7th Revised Edition (UN, 2017)
Australian Standard	Safe Work Australia, Model WHS Regulations 2011
Issue Date	January 2026
Prepared by	Hassan Salimi, Founder & Technical Director, AuSaMicS Pty Ltd
Next Review Date	January 2028 or upon formulation/regulatory change

Key abbreviations: ADG = Australian Dangerous Goods Code; GHS = Globally Harmonized System; WHS = Work Health and Safety; PPE = Personal Protective Equipment; LEV = Local Exhaust Ventilation; WES = Workplace Exposure Standard; FSANZ = Food Standards Australia New Zealand; EFSA = European Food Safety Authority; ADI = Acceptable Daily Intake; MPL = Maximum Permitted Level; EPA = Environment Protection Authority.

DISCLAIMER: The information in this Safety Data Sheet is provided in good faith based on data believed to be accurate as of the issue date. AuSaMicS Pty Ltd makes no warranty, express or implied, and accepts no liability for errors or omissions. Users are responsible for verifying suitability for their specific application and for compliance with all applicable legislation. Carmoisine is not approved for food use in the United States. This SDS is prepared in accordance with Safe Work Australia requirements and the GHS (7th Revised Edition).