



Safety Data Sheet

SDS-ASD-628

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Prepared in accordance with Australian WHS Regulations 2017 & GHS (7th Revision) | Issue Date: March 2026 | Rev: 1.0

Section 1 — Identification

Product Name	Patent Blue V, Patent Blue V calcium salt (C.I. 42051)
Other Names	Acid Blue 3; E131; Food Blue 5; Sulphan Blue; C.I. 42051
Catalog No.	ASD-628
CAS No.	3536-49-0
Intended Use	Biological staining, food colouring (E131), diagnostic colorant — laboratory and permitted applications
Supplier	AuSaMicS Pty Ltd, 31 Longview CT, Thomastown VIC 3074, Australia
ABN	56 676 640 467
Phone	+61 412 520 598
Email / Web	support@ausamics.com / www.ausamics.com.au
Emergency (24h)	Poisons Information Centre: 13 11 26 (Australia)

Section 2 — Hazard Identification

GHS Classification	Not classified as hazardous under GHS / WHS Regulations 2017 for the pure compound at supplied concentration. Eye/skin irritant precautions apply.
Signal Word	Warning (eye and skin irritation precaution)
Hazard Statements	H315: Causes skin irritation (dust/concentrated solution). H319: Causes serious eye irritation. H335: May cause respiratory irritation (dust inhalation).
Precautionary Stmts.	P260 · P264 · P270 · P280 · P305+P351+P338 · P312 · P501
Pictograms	GHS07 (Exclamation mark) — as precaution for dust/concentrated forms
Other Hazards	Dye stains skin, clothing, and surfaces — use PPE. Hygroscopic — absorbs moisture.



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Sensitisation

No known sensitisation in current literature; anaphylaxis reported with pharmaceutical injectable form (Sulphan Blue) — relevant only to clinical injection, not to laboratory use at supplied grade

Section 3 — Composition / Information on Ingredients

Component	CAS No.	Proportion (w/w)	GHS Classification
Patent Blue V calcium salt	3536-49-0	≥ 85% (dye content)	Not classified as hazardous at supplied concentration
Water of crystallisation / moisture	7732-18-5	≤ 10%	Not classified
Minor impurities (manufacturing residues)	—	< 5%	Not classified

Section 4 — First Aid Measures

Inhalation

Remove to fresh air. If respiratory irritation from dust persists, seek medical advice.

Skin Contact

Wash with soap and water. Note: dye will stain skin temporarily (blue/green); staining fades within hours to days. No special treatment required; seek advice if irritation persists.

Eye Contact

Rinse immediately with copious water for at least 15 minutes, holding eyelids open. Seek medical attention if irritation persists. Dye staining of conjunctiva is transient.

Ingestion

Rinse mouth with water. No specific antidote. Seek medical advice. Dye is an approved food additive (E131) — low acute oral toxicity. May cause blue discolouration of urine/faeces transiently.

Medical Note

In rare cases, pharmaceutical-grade injectable Sulphan Blue has been associated with hypersensitivity reactions in clinical settings. This product is a laboratory/food-grade reagent, not an injectable preparation.

Section 5 — Fire-Fighting Measures

Flash Point

Not applicable (non-flammable crystalline solid)



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Extinguishing Media	CO ₂ , dry chemical, or water spray suitable for surrounding fire
Hazardous Products	CO, CO ₂ , NO _x , SO _x , and CaO on high-temperature decomposition/combustion
Fire-Fighting PPE	SCBA in enclosed fire environments; avoid dye-containing smoke inhalation

Section 6 — Accidental Release Measures

Personal Precautions	Wear gloves and eye protection. Dye stains surfaces and skin — act quickly. Avoid generating dust from dry powder.
Environmental	Prevent discharge to waterways or drains. Blue dye may affect aquatic organisms and is highly visible in water. Notify appropriate authority for large spills.
Clean-up (dry)	Sweep or vacuum carefully. Avoid creating airborne dust. Collect in sealed container. Dispose per Section 13.
Clean-up (solution)	Absorb with inert material (sand, vermiculite). Collect in sealed, labelled container. Rinse area with water — staining may persist on porous surfaces.

Section 7 — Handling and Storage

Handling	Use in well-ventilated area. Wear gloves and eye protection. Avoid dust generation. Dye is intensely coloured — protect clothing and surfaces. Do not eat or drink during handling.
Storage	+20 °C, protected from light and moisture; tightly closed original container; store with desiccant due to hygroscopic nature
Incompatible Materials	Strong oxidising agents (bleach, permanganate — decolourise dye); strong reducing agents; concentrated acids and bases
Fire / Explosion	No special fire precautions required for bulk storage

Section 8 — Exposure Controls / Personal Protection

OEL (Safe Work Australia)	No specific WES established for Patent Blue V
Engineering Controls	Local exhaust ventilation when weighing or handling dry powder to prevent dust inhalation
Respiratory	P2 dust mask when generating dust from powder



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Hand Protection	Nitrile or latex gloves (EN 374 / AS/NZS 2161) — dye stains skin intensely
Eye / Face	Safety glasses with side shields; goggles if splash risk from concentrated solutions
Body Protection	Laboratory coat and closed footwear; dye-resistant apron if handling large volumes
Hygiene	Wash hands thoroughly after handling. Dye staining of hands fades within hours. Do not take into food preparation areas.

Section 9 — Physical and Chemical Properties

Property	Value
Physical State (25 °C)	Solid (crystalline powder)
Colour	Dark blue to green
Odour	Essentially odourless
Absorption Maximum	~640 nm (aqueous, neutral pH)
Molecular Weight	602.77 g/mol
Melting Point	Decomposes > 200 °C (estimated)
Flash Point	Not applicable
Vapour Pressure	Negligible
Solubility in Water	High — up to 20.98 g/L at 20 °C
pH (1% aqueous solution)	~4.0–6.0
Hygroscopicity	Hygroscopic — absorbs atmospheric moisture
Explosive / Oxidising	Not explosive; not oxidising

Section 10 — Stability and Reactivity

Stability	Stable under recommended storage conditions (+20 °C, dry, light-protected)
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Conditions to Avoid	Moisture (hygroscopic), direct sunlight, heat > 150 °C, strong oxidising agents
Materials to Avoid	Oxidising agents (chlorine, hypochlorite, permanganate) decolourise the dye; strong acids/bases alter colour and stability
Hazardous Decomposition	CO, CO ₂ , NO _x , SO _x , and CaO on combustion

Section 11 — Toxicological Information

Acute Oral Toxicity	Low — authorised EU food additive (E131); ADI established by JECFA. Oral LD50 (rat) > 2000 mg/kg (estimated from JECFA data)
Skin Irritation	H315 — mild to moderate irritation possible from prolonged contact with concentrated solutions or dust
Eye Irritation	H319 — causes serious eye irritation; transient dye staining of conjunctiva
Sensitisation (Skin)	Not classified as skin sensitiser based on available data
Sensitisation (Inject.)	Anaphylaxis reported with intravenous/intradermal injection in clinical settings (Sulphan Blue injectable). Not applicable to laboratory/food-grade use.
Mutagenicity	Not classified (AMES test: no clear mutagenicity reported in JECFA monograph)
Carcinogenicity	Not classified; IARC not evaluated
Reproductive Toxicity	Not classified at typical exposure levels
STOT (single)	H335 — respiratory irritation from dust; not classified for systemic STOT

Section 12 — Ecological Information

Aquatic Toxicity	Dye may affect aquatic photosynthesis at high concentrations (visible colouration). Prevent discharge to waterways.
Biodegradability	Synthetic dye — limited direct biodegradability; may undergo reductive cleavage in anaerobic conditions
Bioaccumulation	Low bioaccumulation potential (ionic, water-soluble compound)
Colour in Water	Highly visible blue colour at mg/L levels — cosmetic water pollution concern; notify authority for large spills



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PBT / vPvB Not assessed; not expected to meet PBT/vPvB criteria based on physicochemical properties

Section 13 — Disposal Considerations

Waste Classification	General chemical/laboratory waste — not classified as hazardous waste at supplied concentration
Disposal Method	Dilute solutions: treat to decolourise (bleach or activated carbon) before drain disposal (check local regulations). Solid: dispose via licensed chemical waste contractor.
Decolouration	Add dilute NaOCl (bleach) to aqueous dye waste to decolourise before disposal
Food/Feed Grade Use	Disposed food-grade residues: follow food waste disposal regulations
Containers	Clean with water (dye staining expected); dispose or recycle via appropriate stream

Section 14 — Transport Information

UN Number	Not regulated as dangerous goods
ADG (Australia)	Not classified as dangerous goods (road/rail)
IATA / ICAO	Not restricted
IMDG	Not classified
Special Note	Intensely coloured package — label clearly to prevent confusion with other materials

Section 15 — Regulatory Information

AICS (Australia)	Listed on the Australian Inventory of Chemical Substances (AICS)
SUSMP Schedule	Not scheduled for laboratory/food additive use; pharmaceutical injectable form — consult TGA
WHS Regulations	Precautionary classification (irritant, dust) — standard laboratory precautions apply



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EU Food Law	E131 — authorised under Regulation (EC) No. 1333/2008 for specified food categories
FSANZ	Permitted food colour under Australian/New Zealand food standards
TGA	Approved colourant and diagnostic agent (sentinel lymph node mapping) — supplied grade for laboratory/food use only
REACH (EU)	Complies with REACH Regulation (EC) No. 1907/2006

Section 16 — Other Information

SDS Prepared By	AuSaMicS Pty Ltd — Technical & Quality Department
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Review Date	March 2027 or upon regulatory change
Key References	Safe Work Australia; GHS 7th Rev.; JECFA Patent Blue V Monograph; EU Reg. 1333/2008; WHS Regulations 2017
Disclaimer	Information based on current knowledge. Does not constitute a guarantee of quality. Users must verify suitability for specific application.

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