



Safety Data Sheet

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Infosafe No™ 3CHHY Issue Date : June 2020 RE-ISSUED by ABS

Product Name : **SILVER NITRATE 10% Solution**

Classified as hazardous

1. Identification

GHS Product Identifier	SILVER NITRATE 10% Solution
Product Code	ASN
Company Name	AUSTRALIAN BIOSTAIN Pty Ltd
Address	24 - 28 Stratton Drive, Traralgon, Victoria, Australia, 3844 www.australianbiostain.com.au
Telephone/Fax Number	Tel: (03) 5176 2855
Emergency phone number	CHEMCALL (24 hours): 1800 127 406 (Australia) / +64-4-917-9888 (International)
Recommended use of the chemical and restrictions on use	Photographic film, catalyst for ethylene oxide, indelible inks, silver plating, silvering mirrors, silver salts, germicide (as a wall spray), hair dyeing, analytical chemistry, antiseptic, purification of drinking water, fused form to cauterize wounds and laboratory reagent.
Other Information	Australian Biostain Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Australian Biostain Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Australian Biostain Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Hazardous to the Aquatic Environment - Acute Hazard: Category 1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 Eye Damage/Irritation: Category 1 Skin Corrosion/Irritation: Category 1B
Signal Word (s)	DANGER
Hazard Statement (s)	H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects.
Pictogram (s)	Corrosion, Environment



Precautionary statement – Prevention	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P273 Avoid release to the environment.
Precautionary statement – Response	P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P363 Wash contaminated clothing before reuse. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/physician. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 Store locked up.
Precautionary statement – Storage	
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.



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Other Information Persons exhibiting the condition of generalised argyria, and who subsequently died from unrelated disease, showed, on autopsy, a deposition of silver in the blood vessel walls, kidneys, testes, pituitary, choroid plexus, and mucous membranes of the nose, maxillary antra, trachea, and bronchi. Once deposited, there is no known method by which the silver can be eliminated; the pigmentation is permanent and usually noticeable in the conjunctiva of the eye first.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Silver nitrate	7761-88-8	10 %		
	Water to make a total of 100%	7732-18-5	-		

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Skin Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. If symptoms develop seek medical attention.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products May liberate toxic fumes in fire such as oxygen, toxic fumes, nitrous gases, toxic oxides of nitrogen, silver/silver oxides.

Specific Methods This product contains a substantial proportion of water therefore there are no restrictions on the type of extinguishing media which may be used.

Specific hazards arising from the chemical Fire may produce irritating, poisonous, and/or corrosive gases.

Hazchem Code 2X

Precautions in connection with Fire Wear SCBA and chemical splash suit with full breathing apparatus. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Personal Precautions Avoid inhalation, contact with skin, eyes and clothing.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

Environmental Precautions Do not discharge into drains, surface water or ground water. Do not discharge to subsoil/soil.

Other Information Most organisations using silver compounds collect all silver residues for subsequent recovery. Solutions could be washed to drain with a large volume of water, or alternatively treated with a salt solution and the resulting silver chloride collected for subsequent recovery.

7. Handling and storage

Precautions for Safe Handling Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Discard contaminated shoes.



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Conditions for safe storage, including any incompatibilities Keep container tightly closed when not in use, in a cool, dry, well-ventilated area away from incompatible substances. Keep well closed and protected from light and moisture. Sensitive to light.

Storage Temperatures Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m ³	ppm	mg/m ³	ppm	
	Silver nitrate			0.01		Silver, soluble compounds (as Ag)
Other Exposure Information	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Silver, soluble compounds (as Ag) (Safe Work Australia) of 0.01 mg/m ³ and for Silver, metal (Safe Work Australia) of 0.1 mg/m ³ . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.					
Appropriate engineering controls	Use only in well ventilated areas. Maintain eyewash and safety shower facilities.					
Respiratory Protection	Respirator not normally required. Airborne concentrations should be kept to lowest levels possible. If vapour, mist or dust is generated and the occupational exposure limit of the product is exceeded, use appropriate AS/NZS 1715/1716 approved air purifying equipment or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content of the air is unknown.					
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.					
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.					
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.					
Body Protection	Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.					
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.					

9. Physical and chemical properties

Appearance	Clear, colourless liquid.
Odour	Odourless.
Solubility in Water	Completely miscible
Specific Gravity	1.4
pH	3.6 - 6
Flammability	Non combustible material.

10. Stability and reactivity



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Chemical Stability Stable at room temperature in closed containers under normal storage and handling conditions. Light sensitive. Darkens on exposure to light.

Conditions to Avoid Light, temperature extremes, contamination and incompatible materials.

Incompatible Materials Various Metals and alloys.

Possibility of hazardous reactions Avoid reducing agents and alkalis.

Hazardous Polymerization Will not occur.

11. Toxicological Information

Acute Toxicity - Oral LD50 Silver Nitrate:- 1173mg/kg oral rat.

Ingestion Corrosive. Swallowing can cause severe burns of the mouth, throat, stomach and gastrointestinal tract. Can cause sore throat, vomiting, diarrhoea. Poison. Symptoms include pain and burning in the mouth, blackening of the skin and mucous membranes, throat, and abdomen, salivation, vomiting of black material, diarrhoea, collapse, shock, coma and death. Ingestion of soluble silver salts may cause argyria, characterized by permanent blue-gray pigmentation of the skin, mucous membranes, and eyes.

Inhalation Destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include severe irritation, burning sensation, coughing, wheezing, laryngitis, shortness of breath, breathing difficulty, headache, nausea, vomiting and possible coma. May be absorbed into the body following inhalation with symptoms paralleling those from ingestion exposure. Inhalation of silver metal dust and fume or of soluble silver compounds may eventually cause argyria, an unsightly blue-gray discoloration of the skin and mucous membranes, including gum tissue and conjunctiva of the eyes.

Skin Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Corrosive. Can cause blurred vision, redness, pain, severe tissue burns and eye damage.

Chronic Effects May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Repeated inhalation may cause lung disease. Chronic inhalation or ingestion of silver salts may cause argyria characterized by a permanent blue-gray discoloration of the eyes, skin, mucous membranes, and internal organs. This malady results from the accumulation of silver in the body.

12. Ecological information

Ecotoxicity Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. Forms corrosive mixtures with water even if diluted.

Persistence and degradability Methods for the determination of biodegradability are not applicable to inorganic substances.

Bioaccumulative Potential BCF: 200;
Highly bioaccumulative (Biological Concentration Factor 100-1000).

Environmental Protection Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Disposal Considerations Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Class 9 Miscellaneous dangerous goods shall not be loaded in a vehicle with: - Class 1 Explosives - Class 5. 1 Oxidizing agents (when Class 9 substance capable of igniting and burning - Class 5. 2 Organic peroxides (when Cl. 9 capable of igniting/burning)

U.N. Number 3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (Contains silver nitrate 10%)

Transport hazard class(es) 9

Hazchem Code 2X

Packaging Method 3.8.9

Packing Group III



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EPG Number 9C1

IERG Number 47

15. Regulatory information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule S6

16. Other Information

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Chemical Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
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