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**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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**1.1 Product identifier**

**Product name** SILVREX S BRIGHTENER  
**Synonyms** BRIGHTENER S

**1.2 Uses and uses advised against**

**Uses** BRIGHTENER • METAL FINISHING

**1.3 Details of the supplier of the product**

**Supplier name** DUBOIS CHEMICALS AUSTRALIA PTY LIMITED  
**Address** 305 Frankston Dandenong Rd, Dandenong South, VIC, 3175, AUSTRALIA  
**Telephone** (03) 9768 3860  
**Email** [sales@duboischchemicals.com.au](mailto:sales@duboischchemicals.com.au)  
**Website** <http://duboischchemicals.com.au/>

**1.4 Emergency telephone numbers**

**Emergency** 13 11 26 (Poisons Information Centre)

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**2. HAZARDS IDENTIFICATION**

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**2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**Physical Hazards**

Not classified as a Physical Hazard

**Health Hazards**

Acute Toxicity: Oral: Category 2  
Acute Toxicity: Skin: Category 1  
Skin Corrosion/Irritation: Category 2  
Contact with water liberates toxic gas.  
Contact with acids liberates very toxic gas.

**Environmental Hazards**

Aquatic Toxicity (Chronic): Category 2

**2.2 GHS Label elements**

**Signal word** DANGER

**Pictograms****Hazard statements**

AUH029 Contact with water liberates toxic gas.  
AUH032 Contact with acids liberates very toxic gas.  
H300 Fatal if swallowed.  
H310 Fatal in contact with skin.  
H315 Causes skin irritation.  
H411 Toxic to aquatic life with long lasting effects.

## PRODUCT NAME SILVREX S BRIGHTENER

### Prevention statements

P262	Do not get in eyes, on skin, or on clothing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

### Response statements

P302 + P352	IF ON SKIN: Wash with plenty of water.
P310	Immediately call a POISON CENTRE or doctor/physician.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

### Storage statements

P405	Store locked up.
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### Disposal statements

P501	Dispose of contents/container in accordance with relevant regulations.
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### 2.3 Other hazards

No information provided.

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## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
POTASSIUM CYANIDE	151-50-8	205-792-3	<20%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

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## 4. FIRST AID MEASURES

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### 4.1 Description of first aid measures

<b>Eye</b>	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
<b>Inhalation</b>	If inhaled, remove from contaminated area. To protect rescuer, use a Full-face Type B2/3 (Acid gas and hydrogen cyanide) or an Air-line respirator (in poorly ventilated areas). Give oxygen and if necessary, artificial respiration. If giving mouth to mouth, wash out patients mouth and lips-do not inhale patients expired air. Remove contaminated clothing and wash before reuse.
<b>Skin</b>	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Urgent hospital treatment is likely to be needed.
<b>First aid facilities</b>	Eye wash facilities and safety shower should be available.

### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

### 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

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## 5. FIRE FIGHTING MEASURES

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### 5.1 Extinguishing media

Carbon dioxide extinguishers should not be used as contact with cyanides may result in the evolution of flammable hydrogen cyanide gas.

### 5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve flammable and toxic hydrogen cyanide gas in contact with acids, acid salts or carbon dioxide. May evolve nitrogen oxides, phosphorus oxides and metal oxides when heated to decomposition.

**5.3 Advice for firefighters**

Evacuate area and contact emergency services. Toxic and flammable gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire.

**5.4 Hazchem code**

2X  
2 Fine Water Spray.  
X Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel.

**6.2 Environmental precautions**

Prevent product from entering drains and waterways.

**6.3 Methods of cleaning up**

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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**7. HANDLING AND STORAGE**

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**7.1 Precautions for safe handling**

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**7.2 Conditions for safe storage, including any incompatibilities**

Store (bulk) in a secured, windowless but well ventilated area with a minimum 2 metre fence with rain and fire proof cover, removed from direct sunlight, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Containers should be stored off ground.

**7.3 Specific end uses**

No information provided.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**8.1 Control parameters****Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Cyanides (as CN)	SWA [AUS]	--	5	--	--
Cyanides and cyanide salts	SWA [Proposed]	--	1	--	--
Cyanides and cyanide salts (peak limitation)	SWA [Proposed]	--	5 (Peak)	--	--

**Biological limits**

No biological limit values have been entered for this product.

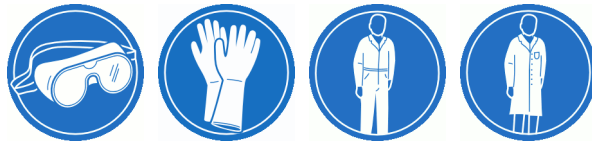
**8.2 Exposure controls**

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. In a laboratory situation use under a fume cupboard or other localised extraction ventilation equipment. Maintain vapour levels below the recommended exposure standard.

**PRODUCT NAME SILVREX S BRIGHTENER**

**PPE**

- Eye / Face**      Wear splash-proof goggles.  
**Hands**            Wear full-length butyl or full-length neoprene gloves.  
**Body**             Wear coveralls or a laboratory coat.  
**Respiratory**     Where an inhalation risk exists, wear a Full-face Type B2/3 (Acid gas and Hydrogen cyanide) respirator.



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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	BROWN LIQUID
<b>Odour</b>	BITTER ALMOND ODOUR
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	106.11°C
<b>Melting point</b>	-5°C
<b>Evaporation rate</b>	NOT AVAILABLE
<b>pH</b>	12
<b>Vapour density</b>	NOT AVAILABLE
<b>Relative density</b>	1.046
<b>Solubility (water)</b>	SOLUBLE
<b>Vapour pressure</b>	NOT AVAILABLE
<b>Upper explosion limit</b>	NOT RELEVANT
<b>Lower explosion limit</b>	NOT RELEVANT
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	NOT AVAILABLE
<b>Decomposition temperature</b>	NOT AVAILABLE
<b>Viscosity</b>	NOT AVAILABLE
<b>Explosive properties</b>	NOT AVAILABLE
<b>Oxidising properties</b>	NOT AVAILABLE
<b>Odour threshold</b>	NOT AVAILABLE

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**10. STABILITY AND REACTIVITY**

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**10.1 Reactivity**

Contact with acids liberates toxic gas.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization is not expected to occur.

**10.4 Conditions to avoid**

Avoid contact with incompatible substances.

**10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), reducing agents (e.g. sulphites), water (evolving toxic and flammable gases), nitrating agents, indium, dinitrogen tetroxide, nitrogen-fluorine compound, heat and ignition sources. Will attack some forms of rubber and plastic.

**10.6 Hazardous decomposition products**

May evolve nitrogen oxides, phosphorus oxides and metal oxides when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**PRODUCT NAME SILVREX S BRIGHTENER**

**11.1 Information on toxicological effects**

**Acute toxicity** Fatal if swallowed, in contact with skin, and if inhaled.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
POTASSIUM CYANIDE	5 mg/kg (rat, rabbit)	--	--

**Skin** Contact may result in irritation, redness, pain and rash.  
**Eye** Contact may result in irritation, lacrimation, pain and redness.  
**Sensitisation** Not classified as causing skin or respiratory sensitisation.  
**Mutagenicity** Not classified as a mutagen.  
**Carcinogenicity** Not classified as a carcinogen.  
**Reproductive** Not classified as a reproductive toxin.  
**STOT - single exposure** Over exposure may result in weakness, headache, nausea, vomiting, confusion, nervousness, breathing difficulties, convulsions, and death from respiratory arrest.  
**STOT - repeated exposure** Individuals with pre-existing kidney, respiratory, skin or thyroid diseases are at a greater risk of developing toxic cyanide effects. Cyanide is reported to cause damage to the central nervous system. Death usually occurs due to respiratory arrest.  
**Aspiration** Not an aspiration hazard.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Toxic to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

Cyanides have been shown to be inherently biodegradable (99%) after adaptation of organisms to non-toxic concentrations (ECHA).

**12.3 Bioaccumulative potential**

Cyanides have a log Kow less than 1 and bioconcentration factor (BCF) of approximately 3; therefore, cyanides are not considered to be bioaccumulative (ECHA).

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

Avoid release to the environment.

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Waste disposal** For small quantities, wear protective equipment and collect (if solid) or absorb with vermiculite or similar (if liquid). Treat with strongly alkaline solution of calcium hypochlorite (CAUTION: Toxic gases may be generated), let stand for 24 hours, absorb with sand or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

**Legislation** Dispose of in accordance with relevant local legislation.

**14. TRANSPORT INFORMATION**

**CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**



**PRODUCT NAME SILVREX S BRIGHTENER**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	1935	1935	1935
<b>14.2 Proper Shipping Name</b>	CYANIDE SOLUTION, N.O.S. (contains potassium cyanide)	CYANIDE SOLUTION, N.O.S. (contains potassium cyanide)	CYANIDE SOLUTION, N.O.S. (contains potassium cyanide)
<b>14.3 Transport hazard class</b>	6.1	6.1	6.1
<b>14.4 Packing Group</b>	II	II	II

**14.5 Environmental hazards**

Marine Pollutant.

**14.6 Special precautions for user**

Hazchem code 2X  
EmS F-A, S-A

**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Poison schedule** Classified as a Schedule 7 (S7) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications** Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

**Inventory listings** **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**  
All components are listed on AIIC, or are exempt.  
**NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals)**  
All components are listed on the NZIoC inventory, or are exempt.

**16. OTHER INFORMATION**

**Additional information** RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**PRODUCT NAME SILVREX S BRIGHTENER**

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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