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

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**1.1 Product identifier**

**Product name** EBONOL C-50  
**Synonyms** EBONOL C50

**1.2 Uses and uses advised against**

**Uses** BLACKENING AGENT • 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@duboischemicals.com.au](mailto:sales@duboischemicals.com.au)  
**Website** <http://duboischemicals.com.au/>

Supplied by  
Caswell Australia P/L  
FACTORY 1, 51 ELM  
PARK DRIVE  
HOPPERS CROSSING  
3029  
VICTORIA

**1.4 Emergency telephone numbers**

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

PH 03 9741 7103  
A/H 0427 70 80 90

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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**

Corrosive to Metals: Category 1

**Health Hazards**

Skin Corrosion/Irritation: Category 2  
Serious Eye Damage / Eye Irritation: Category 2A

**Environmental Hazards**

Aquatic Toxicity (Chronic): Category 3

**2.2 GHS Label elements**

**Signal word** WARNING

**Pictograms****Hazard statements**

H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Prevention statements**

P234 Keep only in original packaging.  
P264 Wash thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**PRODUCT NAME EBNOL C-50****Response statements**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment is advised - see first aid instructions.  
P332 + P337 + P313 If skin or eye irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P390 Absorb spillage to prevent material damage.

**Storage statements**

P406 Store in corrosive resistant container with a resistant inner liner.

**Disposal statements**

P501 Dispose of contents/container in accordance with relevant regulations.

**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
HYDROCHLORIC ACID	7647-01-0	231-595-7	1 to 5%
SELENIUM OXIDE	7446-08-4	231-194-7	1 to 5%
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**

**Eye** 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.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use a Full-face Class P3 (Particulate) respirator where an inhalation risk exists. Apply artificial respiration if not breathing.

**Skin** 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.

**Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Rinse mouth out with water and give plenty of water to drink.

**First aid facilities** 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**

Use an extinguishing agent suitable for the surrounding fire.

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

Non flammable. May evolve toxic gases (selenium oxides) when heated to decomposition.

**5.3 Advice for firefighters**

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

**5.4 Hazchem code**

2X

2 Fine Water Spray.

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

## 6. ACCIDENTAL RELEASE MEASURES

### 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.

## 7. HANDLING AND STORAGE

### 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 in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate fire protection systems.

### 7.3 Specific end uses

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Hydrogen chloride	SWA [Proposed]	2 (Peak)	2.98 (Peak)	--	--
Hydrogen chloride (Hydrochloric acid)	SWA [AUS]	5 (Peak)	7.5 (Peak)	--	--
Selenium compounds (as Se)	SWA [AUS]	--	0.1	--	--

#### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation. In a laboratory situation use under a fume cupboard or other localised extraction ventilation equipment. Maintain vapour levels below the recommended exposure standard.

#### PPE

- Eye / Face** Wear safety glasses.
- Hands** Wear neoprene or PVC or rubber gloves.
- Body** Wear a washable hat and safety boots and coveralls.
- Respiratory** Where an inhalation risk exists, wear a Type B (acid gas and vapours) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Appearance</b>	CLEAR SLIGHT AMBER LIQUID
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	100°C (Approximately)
<b>Melting point</b>	0°C (Approximately)
<b>Evaporation rate</b>	NOT AVAILABLE
<b>pH</b>	1,3 to 1,8
<b>Vapour density</b>	NOT AVAILABLE
<b>Relative density</b>	1,015 to 1,025
<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**

May be corrosive to metals.

**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 heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid) and alkalis (e.g. sodium hydroxide). Incompatible with reducing agents (e.g. sulphites).

**10.6 Hazardous decomposition products**

May evolve toxic gases (selenium oxides) when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

**Acute toxicity** Acute oral exposure may result in irritation of the mouth, throat, oesophagus and gastrointestinal tract.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
HYDROCHLORIC ACID	2210 mg/kg (rat)	--	1108 ppm/1hr (human - respiratory irritation)
SELENIUM OXIDE	68.1 mg/kg (rat)	--	--

**Skin** Contact may result in irritation, redness, rash and dermatitis.

**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** Selenium and selenium compounds are not classifiable as to their carcinogenicity (IARC Group 3).

**Reproductive** Not classified as a reproductive toxin.

**PRODUCT NAME EBNOL C-50**

<b>STOT - single exposure</b>	Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in garlic odour on breath, metallic taste, headache, pallor, dizziness, gastrointestinal disturbances, chest pain and breathing difficulties.
<b>STOT - repeated exposure</b>	Danger of cumulative effects. Selenium is not readily excreted and may build to dangerous levels if exposure is excessive. Repeated exposure may result in damage to the liver, kidney, heart, and lung. May result in central nervous system (CNS) depression, skin lesions, nail and hair loss and garlic odour to breath.
<b>Aspiration</b>	Not classified as causing aspiration.

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Harmful to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

It is known that selenium accumulates in living tissues. Fish are efficient concentrators of selenium. Grains may concentrate selenium present in soil.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

Avoid contamination of drains and waterways.

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

**Waste disposal** Insoluble forms may be consigned to approved landfill site. To convert to insoluble (sulphide) form, (wearing PPE, using fume cupboard): Dissolve in minimum concentrated hydrochloric acid (HCl). Filter if necessary. Dilute with water until white precipitate forms. Add more 6M HCl to redissolve. Saturate with hydrogen sulphide. Filter, wash and dry precipitate. 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



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	1760	1760	1760
<b>14.2 Proper Shipping Name</b>	CORROSIVE LIQUID, N.O.S. (contains selenium dioxide and hydrochloric acid)	CORROSIVE LIQUID, N.O.S. (contains selenium dioxide and hydrochloric acid)	CORROSIVE LIQUID, N.O.S. (contains selenium dioxide and hydrochloric acid)
<b>14.3 Transport hazard class</b>	8	8	8
<b>14.4 Packing Group</b>	III	III	III

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

Hazchem code	2X
GTEPG	8A1

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## 15. REGULATORY INFORMATION

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>Poison schedule</b>	Classified as a Schedule 7 (S7) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classifications</b>	Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).
<b>Inventory listings</b>	<b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b> All components are listed on AIIC, or are exempt.

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## 16. OTHER INFORMATION

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<b>Additional information</b>	<p><b>EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES:</b> Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).</p> <p><b>RESPIRATORS:</b> 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.</p> <p><b>PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:</b> 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.</p> <p><b>HEALTH EFFECTS FROM EXPOSURE:</b> 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.</p>
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<b>Abbreviations</b>	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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