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

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**1.1 Product identifier**

**Product name** NEROSTAR NCR 4  
**Synonyms** NEROSTAR NCR4

**1.2 Uses and uses advised against**

**Uses** ELECTROPLATING • REDUCING AGENT  
Reducing agent in black chromium electroplating.

**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**

Corrosive to Metals: Category 1

**Health Hazards**

Acute Toxicity: Oral: Category 4  
Acute Toxicity: Skin: Category 4  
Skin Corrosion/Irritation: Category 1B  
Serious Eye Damage / Eye Irritation: Category 1  
Specific Target Organ Toxicity (Repeated Exposure): Category 2  
Corrosive to the respiratory tract

**Environmental Hazards**

Not classified as an Environmental Hazard

**2.2 GHS Label elements**

**Signal word** DANGER

**Pictograms**



**PRODUCT NAME NEROSTAR NCR 4****Hazard statements**

AUH071	Corrosive to the respiratory tract
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.

**Prevention statements**

P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**Response statements**

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment is advised - see first aid instructions.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.

**Storage statements**

P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

**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
OXALIC ACID	144-62-7	205-634-3	>95%

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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 Class P3 (Particulate) respirator where an inhalation risk exists. Apply artificial respiration if not breathing.
<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). If swallowed, do not induce vomiting.
<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**

May cause burns. Systemic effects may result in interference with normal calcium levels within the body resulting in kidney damage, heart and nervous system disturbances.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Water spray, dry chemical, alcohol foam or carbon dioxide. Foam or water on molten oxalic acid may cause frothing. Water spray may be used to keep fire exposed containers cool.

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

Combustible. May evolve carbon oxides and hydrocarbons when heated to decomposition.

### 5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic 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. Use waterfog to cool intact containers and nearby storage areas. CAUTION: Contact with water evolves toxic gas.

### 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. Ventilate area where possible. Contact emergency services where appropriate.

### 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 and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills.

### 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>
Oxalic acid	SWA [AUS]	--	1	--	2

#### 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. Maintain dust levels below the recommended exposure standard.

**PPE**

<b>Eye / Face</b>	Wear dust-proof goggles. When using large quantities or where heavy contamination is likely, wear a faceshield.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	Wear coveralls. When using large quantities or where heavy contamination is likely, wear a PVC apron and PVC boots. In a laboratory situation, wear a laboratory coat.
<b>Respiratory</b>	Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator. At high dust levels, wear a Full-face Type A-Class P3 (Organic gases/vapours and Particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line 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>	WHITE CRYSTALLINE SOLID
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	COMBUSTIBLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	157°C
<b>Melting point</b>	189.5°C
<b>Evaporation rate</b>	NOT AVAILABLE
<b>pH</b>	1.3
<b>Vapour density</b>	NOT AVAILABLE
<b>Relative density</b>	1.9
<b>Solubility (water)</b>	SOLUBLE
<b>Vapour pressure</b>	< 0.01 hPa @ 20°C
<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), alkalis (e.g. sodium hydroxide) and silver compounds.

**10.6 Hazardous decomposition products**

May evolve carbon oxides and hydrocarbons when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Harmful if swallowed or in contact with skin.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
OXALIC ACID	425 mg/kg (rat)	--	--

**Skin** Contact may result in pain, burns, discolouration, brittle nails and gangrene-tissue damage.

**Eye** Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible serious eye damage.

**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 mucous membrane irritation of the respiratory tract, coughing and inflammation. High level exposure may result in ulceration of the respiratory tract and lung tissue damage. Systemic effects may result in interference with normal calcium levels within the body resulting in kidney damage, heart and nervous system disturbances.

**STOT - repeated exposure** Prolonged exposure to oxalic acid may lead to urinary stones as crystals of calcium oxalate are a major constituent of kidney stones (HSBD).

**Aspiration** Not classified as causing aspiration.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No information provided.

### 12.2 Persistence and degradability

Readily biodegradable. SOIL: Oxalic acid will degrade quickly on the surface, but would be expected to leach to groundwater. WATER: Will not volatilise, adsorb to sediment, bioconcentrate in aquatic organisms, oxidize or hydrolyse.

### 12.3 Bioaccumulative potential

Not expected to bioaccumulate.

### 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** Neutralise with lime, weak alkali or similar. For small amounts, 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 NEROSTAR NCR 4**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	3261	3261	3261
<b>14.2 Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (contains oxalic acid)	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (contains oxalic acid)	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (contains oxalic 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  
EmS F-A, S-B

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

**Poison schedule** Classified as a Schedule 6 (S6) 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.  
**EUROPE: EINECS (European Inventory of Existing Chemical Substances)**  
All components are listed on EINECS, or are exempt.

**16. OTHER INFORMATION**

**Additional information** ACIDS: When mixing acids with water (diluting), caution must be taken as heat will be generated which causes violent spattering. Always add a small volume of acid to a large volume of water, NEVER the reverse.

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 NEROSTAR NCR 4**

<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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