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

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**1.1 Product identifier****Product name** ENPLATE AL100B**Synonyms** AL100B**1.2 Uses and uses advised against****Uses** INDUSTRIAL APPLICATIONS • SPECIALTY CHEMICAL • SURFACE 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/>**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 4

Skin Corrosion / Irritation: Category 1B

Skin Sensitisation: Category 1

Serious Eye Damage / Eye Irritation: Category 1

Acute Toxicity: Inhalation: Category 4

Respiratory Sensitisation: Category 1

Germ Cell Mutagenicity: Category 2

Carcinogenicity: Category 1A

Toxic to Reproduction: Category 1B

Specific Target Organ Toxicity (Repeated Exposure): Category 1

**Environmental Hazards**

Aquatic Toxicity (Acute): Category 1

Aquatic Toxicity (Chronic): Category 1

**2.2 GHS Label elements****Signal word** DANGER**Pictograms**

**PRODUCT NAME ENPLATE AL100B****Hazard statements**

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Prevention statements**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	Wear respiratory protection.

**Response statements**

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P321	Specific treatment is advised - see first aid instructions.
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
NICKEL SULPHATE	7786-81-4	232-104-9	25 to 50%
AMMONIUM HYDROXIDE	1336-21-6	231-647-6	5 to 20%
ADDITIVE(S)	-	-	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. Remove contaminated clothing and check there is no obstruction to the airway. If breathing is weak or has ceased, give artificial respiration. Further treatment should be symptomatic and supportive. Consult doctor and recommend admission to hospital for observation.
<b>Skin</b>	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If

**PRODUCT NAME ENPLATE AL100B**

swallowed, do not induce vomiting.

**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 (nickel/ nitrogen/ sulphur oxides, ammonia) when heated to decomposition. May evolve nickel 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.

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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. 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.

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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 in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. 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>
Ammonia	SWA [AUS]	25	17	35	24
Nickel, soluble compounds (as Ni)	SWA [AUS]	--	0.1	--	--

#### 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.

#### PPE

- Eye / Face** Wear splash-proof goggles. When using large quantities or where heavy contamination is likely, wear a faceshield.
- Hands** Wear rubber gloves.
- Body** Wear coveralls and a PVC apron and PVC boots.
- Respiratory** Where an inhalation risk exists, wear a Type K (ammonia) / Ammonia respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	CLEAR BLUE LIQUID
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	10.6
Vapour density	NOT AVAILABLE
Relative density	1.16
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

**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), metals, heat and ignition sources.

**10.6 Hazardous decomposition products**

May evolve toxic gases (nickel/ nitrogen/ sulphur oxides, ammonia) when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

**Acute toxicity** Harmful if swallowed or if inhaled. Ingestion may result in burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
NICKEL SULPHATE	275 - 500 mg/kg	--	2.48 mg/L (rat)
AMMONIUM HYDROXIDE	350 mg/kg (rat)	--	1470 ppm (mice) [AICIS]

**Skin** Causes burns. Contact with moist skin may result in irritation, rash, dermatitis, blistering and burns.

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

**Sensitisation** May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic exposure to nickel compounds have been reported to cause an increase in the incidence of asthma.

**Mutagenicity** Nickel sulphate is suspected of causing genetic defects

**Carcinogenicity** May cause cancer. Nickel compounds are classified as carcinogenic to humans (IARC Group 1).

**Reproductive** Nickel sulphate is classified as damaging the unborn child.

**STOT - single exposure** Over exposure may result in irritation of the nose and throat, coughing and bronchitis. High level exposure may result in ulceration of the respiratory tract, lung tissue damage, chemical pneumonitis and pulmonary oedema.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure. Repeated exposure to nickel and its compounds via inhalation may produce respiratory irritation and degeneration in humans. Prolonged exposure via inhalation to high concentrations may result in lung fibrosis.

**Aspiration** Not classified as causing aspiration.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

Very toxic to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

Nickel may persist in natural waters indefinitely, however no data was found to suggest that nickel is involved in any biological transformation in the aquatic environment.

**12.3 Bioaccumulative potential**

Nickel is not expected to accumulate in fish. Nickel does not appear to accumulate in plants or small animals.

**12.4 Mobility in soil**

Soluble in water.

**12.5 Other adverse effects**

Prevent contamination of drains or waterways.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Waste disposal</b>	Solutions: Cover with sodium carbonate (soda ash), lime or similar alkali to ensure pH greater than 8.5. Collect precipitated solids in sealable containers and label accordingly. Solids: Dampen if necessary and avoid dust generation. Collect solids and store in sealable labelled containers. Absorb with soil and contact the manufacturer for disposal instructions.
<b>Legislation</b>	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 ammonium hydroxide)	CORROSIVE LIQUID, N.O.S. (contains ammonium hydroxide)	CORROSIVE LIQUID, N.O.S. (contains ammonium hydroxide)
<b>14.3 Transport hazard class</b>	8	8	8
<b>14.4 Packing Group</b>	II	II	II

### 14.5 Environmental hazards

Marine Pollutant.

### 14.6 Special precautions for user

<b>Hazchem code</b>	2X
<b>GTEPG</b>	8A1
<b>EmS</b>	F-A, S-B

**Other information** The environmentally hazardous substance mark is not required when transported in packages of less than 5 kg/L (UN Model Regulations: Special Provision 375; IATA: Special Provision A197; IMDG: Special Provision 969) or less than 500 kg/L by Australian Road and Rail.

## 15. REGULATORY INFORMATION

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

<b>Poison schedule</b>	Classified as a Schedule 6 (S6) 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.

## 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.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): 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).

**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.

**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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