SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name	**TRIPASS ELV 5500 PART A**
Synonyms	TRIPASS ELV 5500 - PART A ● TRIPASS ELV5500 PART A

1.2 Uses and uses advised against

Uses	INDUSTRIAL APPLICATIONS ● SPECIALTY CHEMICAL ● SURFACE TREATMENT

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
Website	http://duboischemicals.com.au/

1.4 Emergency telephone numbers

Emergency	13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

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

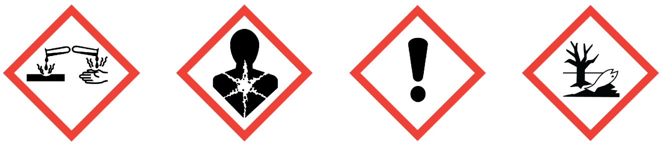
Health Hazards

Acute Toxicity: Oral: Category 4
Skin Corrosion/Irritation: Category 1B
Skin Sensitisation: Category 1
Serious Eye Damage / Eye Irritation: Category 1
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 (Chronic): Category 2

2.2 GHS Label elements

Signal word	**DANGER**
Pictograms	

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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	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.
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.
P284	Wear respiratory 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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTRE or doctor/physician.
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.

Disposal statements

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

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
CHROMIUM (III) CHLORIDE	10025-73-7	233-038-3	1 to 10%
COBALT (II) NITRATE	10141-05-6	233-402-1	1 to 10%
HYDROCHLORIC ACID	7647-01-0	231-595-7	1 to 10%
NICKEL CHLORIDE HEXAHYDRATE	7791-20-0	616-576-7	1 to 10%
NITRIC ACID	7697-37-2	231-714-2	1 to 10%
SODIUM HYDROGEN FLUORIDE	1333-83-1	215-608-3	1 to 10%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

4. FIRST AID MEASURES

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 Type B (Inorganic and acid gas) respirator or an Air-line respirator (in poorly ventilated areas). 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). If 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

Causes severe skin burns and eye damage.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

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 (nitrogen oxides, chlorides, hydrogen chloride) when heated to decomposition. May evolve flammable hydrogen gas in contact with some metals.

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.

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 sodium bicarbonate or 50-50 mixture of sodium carbonate and calcium hydroxide. Collect for complete neutralisation and appropriate 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 be bunded and have appropriate ventilation 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/m³	ppm	mg/m³
CHROMIUM (III) CHLORIDE	SWA [AUS]	--	0.5	--	--
Chromium (metal), (II), (III) (as Cr)	SWA [Proposed]	--	0.04	--	--
Cobalt (metal and inorganic)	SWA [Proposed]	--	0.02	--	--
Cobalt, metal dust & fume (as Co)	SWA [AUS]	--	0.05	--	--
Fluorides, as F	SWA [AUS]	--	2.5	--	--
Hydrogen chloride	SWA [Proposed]	2 (Peak)	2.98 (Peak)	--	--
Hydrogen chloride (Hydrochloric acid)	SWA [AUS]	5 (Peak)	7.5 (Peak)	--	--
Nickel, soluble compounds (as Ni)	SWA [AUS]	--	0.1	--	--
Nitric acid	SWA [AUS]	2	5.2	4	10
Nitric acid	SWA [Proposed]	2	5.2	--	--

Biological limits

Ingredient	Determinant	Sampling Time	BEI
COBALT (II) NITRATE	Cobalt in urine	End of shift at end of workweek	15 µg/L
SODIUM HYDROGEN FLUORIDE	Fluoride in urine	Prior to shift	2 mg/L
	Fluoride in urine	End of shift	3 mg/L

Reference: ACGIH Biological Exposure Indices

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.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	Wear coveralls and rubber boots. In a laboratory situation, wear a laboratory coat.
Respiratory	Where an inhalation risk exists, wear an Air-line respirator or a Full-face Type B (Inorganic and Acid gas) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	CLEAR GREEN LIQUID
Odour	ACIDIC ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	> 100°C
Melting point	< 0°C
Evaporation rate	AS FOR WATER
pH	1
Vapour density	NOT AVAILABLE
Relative density	1.171
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT

9.1 Information on basic physical and chemical properties

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

9.2 Other information

VOC	0 g/L

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 will not occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Incompatible with combustible materials, reducing agents (e.g. sulphites), alkalis (e.g. sodium hydroxide), metals, heat and ignition sources.

10.6 Hazardous decomposition products

May evolve toxic gases (nitrogen oxides, chlorides, hydrogen chloride) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Ingestion may result in severe 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
CHROMIUM (III) CHLORIDE	440 mg/kg (rat)	--	31.5 mg/m^3/2 hr (mouse)
COBALT (II) NITRATE	434 mg/kg (rat)	--	--
HYDROCHLORIC ACID	2210 mg/kg (rat)	--	1108 ppm/1hr (human - respiratory irritation)
NICKEL CHLORIDE HEXAHYDRATE	105 mg/kg (rat)	--	--
NITRIC ACID	--	--	2.65 mg/l (Vapours)

Skin	Causes severe burns. Contact may result in irritation, redness, pain, rash, dermatitis and severe burns.
Eye	Causes severe burns. Contact may result in irritation, lacrimation, pain, redness, corneal burns and serious eye damage.
Sensitisation	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Mutagenicity	Suspected of causing genetic defects.
Carcinogenicity	May cause cancer. Nickel compounds are classified as carcinogenic to humans (IARC Group 1). Cobalt and cobalt compounds are classified as possibly carcinogenic to humans (IARC Group 2B).
Reproductive	May damage fertility or 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. Effects may be delayed.

STOT - repeated exposure	Repeated exposure to nickel metal via inhalation may produce respiratory irritation and degeneration in humans (particles under 0.1mm diameter). Prolonged exposure via inhalation to high concentrations may result in lung fibrosis. Repeated exposure to cobalt compounds may result in liver, kidney, lung and heart damage.
Aspiration	Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Not expected to be persistent in the aquatic environment.

12.3 Bioaccumulative potential

Not expected to bioaccumulate.

12.4 Mobility in soil

Soluble in water.

12.5 Other adverse effects

Avoid contamination of drains and waterways.

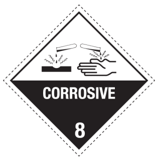
13. DISPOSAL CONSIDERATIONS

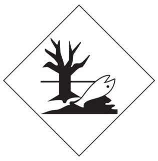
13.1 Waste treatment methods

Waste disposal	For small amounts (as determined by risk assessment or similar): Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well ventilated area. For larger amounts: Dispose in accordance with local regulations.
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)
14.1 UN Number	3264	3264	3264
14.2 Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
14.3 Transport hazard class	8	8	8
14.4 Packing Group	II	II	II

14.5 Environmental hazards

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 5 (S5) 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.

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.

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^3	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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