

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet  
Issue Date: 30-Nov-2006  
NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 1 of 13

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

CIGWELD COMWELD ALUMINIUM FLUX

### SYNONYMS

"Product Code: 321740"

### PRODUCT USE

All purpose flux for fusion welding sheet and cast aluminium.

### SUPPLIER

Company: CIGWELD Pty Ltd  
Address:  
71 Gower Street  
Preston  
VIC 3072  
AUS  
Telephone: (03) 9474 7400  
Telephone: 1300 654 674  
Emergency Tel: (03) 9474 7400

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## Section 2 - HAZARDS IDENTIFICATION

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### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.**

### POISONS SCHEDULE

S6

### RISK

Toxic if swallowed.  
Contact with acids liberates very toxic gas.  
Irritating to eyes and skin.

### SAFETY

Keep locked up.  
Keep container in a well ventilated place.  
Avoid exposure - obtain special instructions before use.  
To clean the floor and all objects contaminated by this material, use water.  
This material and its container must be disposed of in a safe way.  
Keep away from food, drink and animal feeding stuffs.  
Take off immediately all contaminated clothing.  
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
potassium chloride	7447-40-7	30-60
lithium chloride	7447-41-8	10-30
sodium chloride	7647-14-5	10-30

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 2 of 13

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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sodium fluoride	7681-49-4	10-30
In use may generate fluoride fume	16984-48-8	
Welding rods used with this flux when welding may generate welding fumes	Not avail.	
aluminium fumes	7429-90-5	

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

### EYE

- If this product or its vapours come in contact with the eyes,
- DO NOT DELAY: Immediately irrigate continuously by holding the eyelids apart and washing with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids
  - Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
  - Transport to hospital, eye clinic or eye specialist, ophthalmologist without delay.

### SKIN

- If there is evidence of severe skin irritation or skin burns:
- Avoid further contact. Immediately remove contaminated clothing, including footwear.
  - Flush skin under running water for 15 minutes.
  - Avoiding contamination of the hands, massage calcium gluconate gel into affected areas, pay particular attention to creases in skin.
  - Contact the Poisons Information Centre.
  - Continue gel application for at least 15 minutes after burning sensation ceases.
  - If pain recurs, repeat application of calcium gluconate gel or apply every 20 minutes.
  - If no gel is available, continue washing for at least 15 minutes, using soap if available. If patient is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.
  - Transport to hospital, or doctor, urgently.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

### NOTES TO PHYSICIAN

For acute or short term repeated exposures to fluorides:

- Fluoride absorption from gastro-intestinal tract may be retarded by calcium salts, milk or antacids.

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

## Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 3 of 13

Section 4 - FIRST AID MEASURES

- Fluoride particulates or fume may be absorbed through the respiratory tract with 20-30% deposited at alveolar level.
- Peak serum levels are reached 30 mins. post-exposure; 50% appears in the urine within 24 hours.
- For acute poisoning (endotracheal intubation if inadequate tidal volume), monitor breathing and evaluate/monitor blood pressure and pulse frequently since shock may supervene with little warning. Monitor ECG immediately; watch for arrhythmias and evidence of Q-T prolongation or T-wave changes. Maintain monitor. Treat shock vigorously with isotonic saline (in 5% glucose) to restore blood volume and enhance renal excretion.
- Where evidence of hypocalcaemic or normocalcaemic tetany exists, calcium gluconate (10 ml of a 10% solution) is injected to avoid tachycardia.

### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Fluorides in urine	3 mg/gm creatinine	Prior to shift	B, NS
	10mg/gm creatinine	End of shift	B, NS

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other exposures.

## Section 5 - FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Non combustible.
  - Not considered a significant fire risk, however containers may burn.
- Decomposition may produce toxic fumes of: hydrogen chloride, fluorides, metal oxides. caustic compounds.  
May emit corrosive fumes.

### FIRE INCOMPATIBILITY

None known.

HAZCHEM: None

### Personal Protective Equipment

Breathing apparatus.  
Chemical splash suit.

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet  
Issue Date: 30-Nov-2006  
NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 4 of 13

## Section 6 - ACCIDENTAL RELEASE MEASURES

### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

#### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible. Avoid generating dust.
- Sweep / shovel up.
- If required, wet with water to prevent dusting.
- Put residues in labelled plastic bags or other containers for disposal.
- Wash area down with large quantity of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

### EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

potassium chloride	15 mg/m <sup>3</sup>
lithium chloride	60 mg/m <sup>3</sup>
sodium chloride	500 mg/m <sup>3</sup>
sodium fluoride	75 mg/m <sup>3</sup>

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

potassium chloride	15 mg/m <sup>3</sup>
lithium chloride	10 mg/m <sup>3</sup>
sodium chloride	300 mg/m <sup>3</sup>
sodium fluoride	5.00 mg/m <sup>3</sup>

other than mild, transient adverse effects without perceiving a clearly defined odour is:

potassium chloride	5 mg/m <sup>3</sup>
lithium chloride	1.5 mg/m <sup>3</sup>
sodium chloride	40 mg/m <sup>3</sup>
sodium fluoride	5 mg/m <sup>3</sup>

The threshold concentration below which most people will experience no appreciable risk of health effects:

potassium chloride	1.5 mg/m <sup>3</sup>
lithium chloride	0.5 mg/m <sup>3</sup>
sodium chloride	15 mg/m <sup>3</sup>
sodium fluoride	5 mg/m <sup>3</sup>

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet  
Issue Date: 30-Nov-2006  
NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 5 of 13

## Section 6 - ACCIDENTAL RELEASE MEASURES

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Atmosphere should be checked against exposure standards
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.

### SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

### STORAGE INCOMPATIBILITY

Contact with acids produces toxic fumes.

### STORAGE REQUIREMENTS

- Keep dry.
- Store under cover.
- Protect containers against physical damage.
- Observe manufacturer's storing and handling recommendations.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC
Australia Exposure Standards	potassium chloride (Inspirable dust (Not specified))		10					
Australia Exposure Standards	lithium chloride (Inspirable dust (Not specified))		10					
Australia Exposure Standards	sodium chloride (Inspirable dust (Not specified))		10					
Australia Exposure Standards	fluoride fume (Fluorides (as F))		2.5					
Australia Exposure Standards	aluminium fumes (Aluminium, pyro powders (as Al))		5					
Australia Exposure	aluminium fumes		5					

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 6 of 13

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC
Standards	(Aluminium (welding fumes) (as Al))							
Australia Exposure Standards	aluminium fumes (Aluminium (metal dust))		10					

The following materials had no OELs on our records

- sodium fluoride: CAS:7681-49-4

### MATERIAL DATA

Not available. Refer to individual constituents.

#### INGREDIENT DATA

LITHIUM CHLORIDE:

POTASSIUM CHLORIDE:

SODIUM CHLORIDE:

POTASSIUM CHLORIDE:

LITHIUM CHLORIDE:

SODIUM CHLORIDE:

SODIUM FLUORIDE: ES TWA: 2.5 mg/m<sup>3</sup> fluorides as F

Based on a study in which the threshold for minimum increase in bone density due to fluoride exposure was 3.38 mg/m<sup>3</sup> (as fluoride), the present TLV-TWA has been adopted to prevent irritant effects and disabling bone changes. There is also support for the proposition that occupational exposure below the TLV will have no adverse effect on pregnant women or off-spring. IARC has classified fluorides in drinking water as Group 3 carcinogens; i.e. Not classifiable as to its carcinogenicity to humans. Equivocal evidence of carcinogenic activity (osteosarcoma) has been found in male rats administered sodium fluoride in drinking water. (0-175 ppm) Evidence was not found in female rats or in male or female mice.

FLUORIDE FUME:

Not available

WELDING FUMES:

In addition to complying with any individual exposure standards for specific contaminants, where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5 mg/m<sup>3</sup>, when collected in accordance with the appropriate standard (AS 3640, for example).

ES\* TWA: 5 mg/m<sup>3</sup>

TLV\* TWA: 5 mg/m<sup>3</sup>, B2 (a substance of variable composition)

OES\* TWA: 5 mg/m<sup>3</sup>

Most welding, even with primitive ventilation, does not produce exposures inside the welding helmet above 5 mg/m<sup>3</sup>. That which does should be controlled (ACGIH). Inspirable dust concentrations in a workers breathing zone shall be collected and measured in accordance with AS 3640, for example. Metal content can be analytically determined by OSHA Method ID25 (ICP-AES) after total digestion of filters and dissolution of captured metals. Sampling of the Respirable Dust fraction requires cyclone separator devices (elutriators) and procedures to comply with AS 2985 (for example).

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet  
Issue Date: 30-Nov-2006  
NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 7 of 13

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ALUMINIUM FUMES:  
Not available

### PERSONAL PROTECTION

#### EYE

- Welding mask, goggles, hand shield.

#### HANDS/FEET

Welding Gloves  
Safety footwear.

#### OTHER

- Overalls.  
- Eyewash unit.  
Aprons, sleeves, shoulder covers, leggings or spats of pliable flame resistant leather or other suitable materials may also be required in positions where these areas of the body will encounter hot metal.  
Always ensure that a supply, is on hand, of calcium gluconate gel for treatment of burns and calcium carbonate tablets for accidental ingestion.

#### RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

\* - Negative pressure demand \*\* - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.  
For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

For brazing or soldering the nature of ventilation is determined by the location of the work.  
- For outdoor work, natural ventilation is generally sufficient.  
- For indoor work, conducted in either open or limited spaces, use mechanical (general exhaust or plenum) ventilation. (Open work spaces exceed 300 cubic meters per welder)  
For work conducted in confined spaces, mechanical ventilation, using local exhaust systems, is required. (In confined spaces always check that oxygen has not been depleted by excessive rusting of steel or snowflake corrosion of aluminium) Mechanical or local exhaust ventilation may not be required where the process working time does not exceed 24 mins. (in an 8 hr. shift) provided the work is intermittent (a maximum of 5 mins. every hour). Local exhaust systems must be designed to provide a minimum capture velocity at the fume source, away from the worker, of 0.5 metre/sec.  
If risk of overexposure exists, wear SAA approved respirator.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

White odourless powder; mixes with water. Does not decompose on exposure to air or water.

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 8 of 13

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Does not react with plastic or rubber or corrode common metals

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

Contact with acids liberates very toxic gas.

Molecular Weight: Not Applicable

Melting Range (°C): 545

Solubility in water (g/L): Miscible

pH (1% solution): Not Available

Volatile Component (%vol): Not Applicable

Relative Vapour Density (air=1): Not Available

Lower Explosive Limit (%): Not Applicable

Autoignition Temp (°C): Not Applicable

State: Divided solid

Boiling Range (°C): Not Available

Specific Gravity (water=1): 1.1

pH (as supplied): Not Applicable

Vapour Pressure (kPa): Not Applicable

Evaporation Rate: Not Applicable

Flash Point (°C): Not Applicable

Upper Explosive Limit (%): Not Applicable

Decomposition Temp (°C): Not Available

Viscosity: Not Available

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

Fluoride causes severe loss of calcium in the blood, with symptoms appearing several hours later including painful and rigid muscle contractions of the limbs. Cardiovascular collapse can occur and may cause death with increased heart rate and other heart rhythm irregularities. The brain and kidneys may be affected. Other toxic effects include headache, increased saliva output, jerking of the eyeball and dilated pupils, lethargy, stupor, coma and rarely, convulsions.

##### EYE

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

##### SKIN

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

The material may accentuate any pre-existing dermatitis condition.

Fluorides are easily absorbed through the skin and cause death of soft tissue and erode bone. Healing is delayed and death of tissue may continue to spread beneath skin.

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 9 of 13

Section 11 - TOXICOLOGICAL INFORMATION

## INHALED

Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort. A single acute over-exposure may even cause nose bleed. Pre-existing respiratory conditions such as emphysema, bronchitis may be aggravated by exposure. Occupational asthma may result from exposure.

## CHRONIC HEALTH EFFECTS

Extended exposure to inorganic fluorides causes fluorosis, which includes signs of joint pain and stiffness, tooth discolouration, nausea and vomiting, loss of appetite, diarrhoea or constipation, weight loss, anaemia, weakness and general unwellness. There may also be frequent urination and thirst. Redness, itchiness and allergy-like inflammation of the skin and mouth cavity can occur. The central nervous system may be involved.

## TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

### POTASSIUM CHLORIDE:

#### TOXICITY

Oral (man) LDLo: 20 mg/kg

Oral (woman) TDLo: 60 mg/kg

Oral (rat) LD50: 2600 mg/kg

#### IRRITATION

Eye (rabbit): 500 mg/24h - mild

### LITHIUM CHLORIDE:

#### TOXICITY

Oral (rat) LD50: 526 mg/kg

Oral (human) LDLo: 200 mg/kg/3d

Oral (human) TDLo: 243 mg/kg/13d

Neoplastic by RTECS criteria.

#### IRRITATION

Skin (rabbit): 500 mg/24h

Eye (rabbit): 100 mg/24h

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

Ptosis, altered sleep times, tremor, muscle weakness, antipsychotic behaviour, nausea, vomiting, androgenicity, changes in spermatogenesis, Hodgkins lymphoma, abortion, foetal death, specific development abnormalities recorded.

### SODIUM CHLORIDE:

#### TOXICITY

Oral (rat) LD50: 3000 mg/kg

Oral (human) TDLo: 12357 mg/kg/23d

Oral Lowest Toxic Dose (Human): 8.2 mg/kg Eye (rabbit): 100 mg/24h - Moderate

#### IRRITATION

Skin (rabbit): 500 mg/24h - Mild

Eye (rabbit): 10 mg - Moderate

### SODIUM FLUORIDE:

#### TOXICITY

Oral (human) LDLo: 71 mg/kg

Oral (woman) LDLo: 90 mg/kg

Oral (human) TDLo: 0.21 mg/kg

Oral (woman) TDLo: 7 mg/kg

Oral (man) TDLo: 1662 mg/kg

Oral (rat) LD50: 52 mg/kg

#### IRRITATION

Eye (rabbit): 20 mg/24h- Moderate

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 10 of 13

Section 11 - TOXICOLOGICAL INFORMATION

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

## FLUORIDE FUME:

### TOXICITY

Oral (human) LDLo: 50 mg/kg

Oral (human) TDLo: 3 mg/kg

### IRRITATION

Nil Reported

## WELDING FUMES:

Not available. Refer to individual constituents.

WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

## ALUMINIUM FUMES:

No toxicity or irritation data available.

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## Section 12 - ECOLOGICAL INFORMATION

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DO NOT discharge into sewer or waterways.

Refer to data for ingredients, which follows:

### POTASSIUM CHLORIDE:

No data

### LITHIUM CHLORIDE:

Fish toxicity - LC50 (96 hr): > 105 mg/L. striped bass

Environmental Summary Toxicity - Harmful to aquatic life.

### SODIUM CHLORIDE:

TLm 96 > 1000 ppm

### SODIUM FLUORIDE:

Toxicity invertebrate: LC50 (48h) 1987 ppm

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## Section 13 - DISPOSAL CONSIDERATIONS

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- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

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## Section 14 - TRANSPORTATION INFORMATION

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HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 11 of 13

## Section 15 - REGULATORY INFORMATION

### POISONS SCHEDULE: S6

### REGULATIONS

potassium chloride (CAS: 7447-40-7) is found on the following regulatory lists;

Australia - Australia New Zealand Food Standards Code - Food Additives - Schedule 1  
Permitted uses of food additives by food type

Australia - Australia New Zealand Food Standards Code - Food Additives - Schedule 2  
Miscellaneous additives permitted in accordance with GMP in processed foods specified in  
Schedule 1

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient  
environmental standards (Domestic water supply - inorganic chemicals)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Irrig)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Stock)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in  
Food in General, Unless Otherwise Specified, in Accordance with GMP

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

lithium chloride (CAS: 7447-41-8) is found on the following regulatory lists;

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient  
environmental standards (Domestic water supply - inorganic chemicals)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Irrig)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Stock)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

lithium chloride (CAS: 85144-11-2) is found on the following regulatory lists;

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient  
environmental standards (Domestic water supply - inorganic chemicals)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Irrig)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Agricultural uses (Stock)

Australia - Australian Capital Territory Environment Protection Regulation  
Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995

CD 2006/4 Page 12 of 13

Section 15 - REGULATORY INFORMATION

sodium chloride (CAS: 7647-14-5) is found on the following regulatory lists;

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

sodium fluoride (CAS: 7681-49-4) is found on the following regulatory lists;

Australia - Australia New Zealand Food Standards Code - Processing Aids - Permitted processing aids used in packaged water and in water used as an ingredient in other foods

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Poisons Schedule

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

The Australia Group Export Control List: Chemical Weapons Precursors

fluoride fume (CAS: 16984-48-8) is found on the following regulatory lists;

Australia - Australian Capital Territory Environment Protection Regulation

Agricultural Uses (IRRIG) - Physical and chemical quality

Australia - Australian Capital Territory Environment Protection Regulation

Agricultural uses (STOCK) - Physical and chemical quality

Australia Dangerous Goods Code Draft 7th Edition - List of Common Pesticides with

Corresponding UN Numbers

Australia Exposure Standards

Australia National Pollutant Inventory

Australia Poisons Schedule

welding fumes (CAS No:Not avail):

No regulations applicable

aluminium fumes (CAS: 7429-90-5) is found on the following regulatory lists;

Australia - Australia New Zealand Food Standards Code - Food Additives - Schedule 1

Permitted uses of food additives by food type

Australia - Australian Capital Territory Environment Protection Regulation

Agricultural Uses (IRRIG) - Physical and chemical quality

Australia - Australian Capital Territory Environment Protection Regulation

Agricultural uses (STOCK) - Physical and chemical quality

Australia - Australian Capital Territory Environment Protection Regulation

Pollutants entering waterways - Agricultural uses (Irrig)

Australia - Australian Capital Territory Environment Protection Regulation

Pollutants entering waterways - Agricultural uses (Stock)

Australia - Australian Capital Territory Environment Protection Regulation

Pollutants entering waterways - Domestic water quality

Australia - Australian Capital Territory Environment Protection Regulation

Pollutants entering waterways - Ecosystem maintenance

Australia Exposure Standards

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

No data available for welding fumes as CAS: Not avail.

continued...

# CIGWELD COMWELD ALUMINIUM FLUX

Chemwatch Material Safety Data Sheet

Issue Date: 30-Nov-2006

NC317ECP

CHEMWATCH 20995  
CD 2006/4 Page 13 of 13

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## Section 16 - OTHER INFORMATION

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### INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
lithium chloride	7447- 41- 8, 85144- 11- 2

### REPRODUCTIVE HEALTH GUIDELINES

Ingredient	ORG	UF	Endpoint	CR	Adeq	TLV
sodium fluoride	2.5 mg/m3	NA	NA	NA	Yes	

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.

CR = Cancer Risk/10000; UF = Uncertainty factor:

TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive

American Industrial Hygiene Association Journal 57: 641-649 (1996).

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