

# AQUA DECREASE G

(ChemWatch name: ANDREW SODIUM BISULPHATE (ANHYDROUS) - TECHNICAL GRADE)

ChemWatch Material Safety Data Sheet  
Issue Date: Mon 29-Jan-2001

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

AQUA DECREASE G

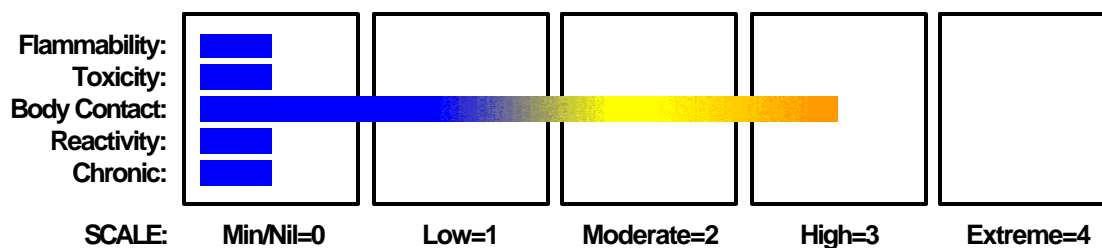
### STATEMENT OF HAZARDOUS NATURE

**Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.**

### SUPPLIER

Company: Andrew Limited  
Address:  
3 Porana Road  
Glenfield  
AUCKLAND  
Telephone: 09 444 3733  
Telephone: 0800 429 628  
Emergency Tel: 0800 243 622  
Fax: 09 444 3838

### HAZARD RATINGS



### PRODUCT USE

Toilet bowl cleaner, pH decriaser in spas and pools, metal cleaner and water treatment for boilers and cooling towers.

### SYNONYMS

NaHSO<sub>4</sub>  
HO<sub>4</sub>SNa  
sodium acid sulfate sulphate bisulfate

HNaO<sub>4</sub>S  
sodium hydrogen sulfate (anhydrous)  
niter cake

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ...

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bisulphate  
sulphuric

sulfuric acid, monosodium salt

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## Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

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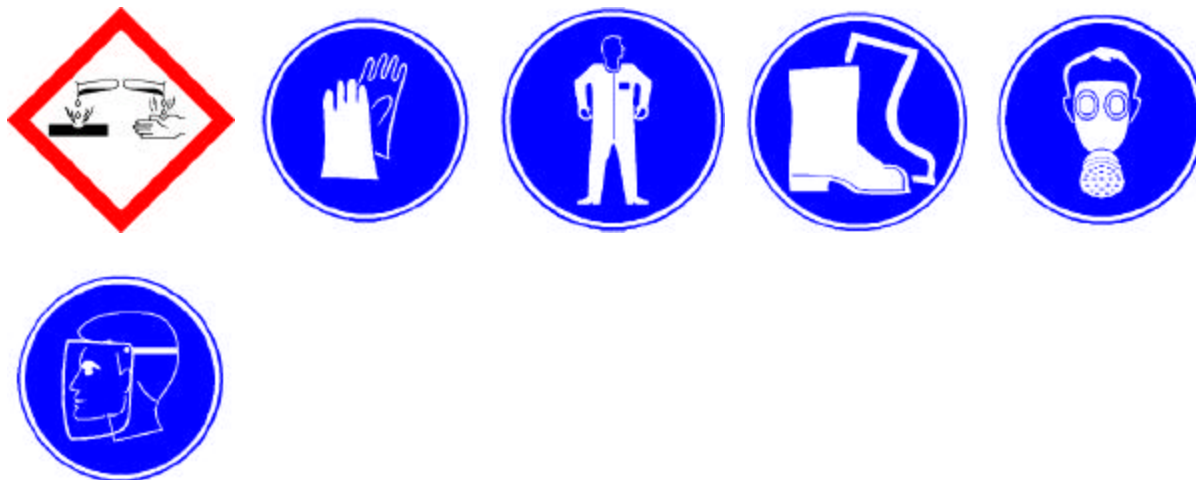
NAME	CAS RN	%
sodium hydrogen sulfate	7681-38-1	>60

NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

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## Section 3 - HAZARDS IDENTIFICATION

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### EMERGENCY OVERVIEW

#### HAZARD

- 8.2B Corrosive to skin
- 8.3A Corrosive to eyes

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

##### EYE

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. When applied to the eye(s) of animals, the material produces severe ocular

continued...

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## Section 3 - HAZARDS IDENTIFICATION ...

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lesions which are present twenty-four hours or more after instillation.

### SKIN

The material can produce chemical burns following direct contact with the skin.

### INHALED

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

### CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

If poisoning occurs, contact a doctor or Poisons Information Centre.

- 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 unconsciousness
- 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 comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with 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 or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

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## Section 4 - FIRST AID MEASURES ...

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### INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

### NOTES TO PHYSICIAN

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

### INGESTION:

- Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.
- Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- Charcoal has no place in acid management.
- Some authors suggest the use of lavage within 1 hour of ingestion.

### SKIN:

- Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- Deep second-degree burns may benefit from topical silver sulfadiazine.

### EYE:

- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes.

DO NOT use neutralising agents or any other additives. Several litres of saline are required.

- Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.

- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

Dry chemical powder.

BCF (where regulations permit).

Carbon dioxide.

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## Section 5 - FIRE FIGHTING MEASURES ...

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### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- 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 to be a significant fire risk.
  - Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
  - Heating may cause expansion or decomposition leading to violent rupture of containers.
  - May emit corrosive, poisonous fumes. May emit acrid smoke.
- Decomposition may produce toxic fumes of sulfur oxides (SO<sub>x</sub>)

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Place in suitable containers for disposal.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

Glass container

Plastic container

Plastic drum

Plastic bag

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

Polylined drum

- Check that containers are clearly labelled
- Packaging as recommended by manufacturer.

### STORAGE REQUIREMENTS

Keep dry

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

DO NOT use aluminium or galvanised containers

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

No data for Andrew Sodium Bisulphate (Anhydrous) - Technical Grade.

continued...

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

### EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

Composite Exposure Standard for Mixture (TWA) :2.5 mg/m<sup>3</sup>.

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc (%)

Component	Breathing Zone (mg/m <sup>3</sup> )	Mixture Conc (%)
sodium hydrogen sulfate	2.5000	100.0

### INGREDIENT DATA

SODIUM HYDROGEN SULFATE:

CEL TWA: 2.5 mg/m<sup>3</sup>

[Manufacturer]

### PERSONAL PROTECTION



### EYE

- Safety glasses with side shields
- Chemical goggles.
- Full face shield.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

### HANDS/FEET

- Rubber gloves
- PVC gloves
- Safety footwear
- Rubber boots

### OTHER

- Rubber apron
- Overalls
- Eyewash unit.
- Ensure there is ready access to a safety shower

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

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### ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (in still air)	Air Speed: 0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

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multiplied by factors of 10 or more when extraction systems are installed or used.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### PHYSICAL PROPERTIES

Solid.  
Mixes with water.  
Corrosive.  
Acid.

Molecular Weight: Not applicable  
Melting Range (°C): >315  
Solubility in water (g/L): Soluble.  
pH (1% solution): 1.4  
Volatile Component (%vol): Nil.  
Relative Vapour Density (air=1): Not applicable  
Lower Explosive Limit (%): Not applicable  
Autoignition Temp (°C): Not applicable  
State: Divided solid

Boiling Range (°C): Decomposes.  
Specific Gravity (water=1): 2.44  
pH (as supplied): Not applicable  
Vapour Pressure (kPa): Not applicable  
Evaporation Rate: Not applicable  
Flash Point (°C): Non Flammable  
Upper Explosive Limit (%): Not applicable  
Decomposition Temp (°C):

### APPEARANCE

White to light yellow free flowing hygroscopic crystals; soluble in water.  
Slightly soluble in alcohol.

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

Presence of water  
Decomposes in the presence of moisture to produce corrosive acid.  
Stable under normal storage conditions  
Product is considered stable under normal handling conditions  
Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### Aqua Decrease G

No data for Andrew Sodium Bisulphate (Anhydrous) - Technical Grade.

SODIUM HYDROGEN SULFATE:  
TOXICITY

IRRITATION

continued...

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## Section 11 - TOXICOLOGICAL INFORMATION ...

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Oral (rat) LD50: 2828 mg/kg [CCINFO]

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## Section 12 - ECOLOGICAL INFORMATION

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No data for Andrew Sodium Bisulphate (Anhydrous) - Technical Grade.  
Refer to data for ingredients, which follows:

SODIUM HYDROGEN SULFATE:

DO NOT discharge into sewer or waterways.

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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 Management Authority for disposal.
  - Treat and neutralise with soda ash at an effluent treatment plant.
  - Recycle containers, otherwise dispose of in an authorised landfill.
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## Section 14 - TRANSPORTATION INFORMATION

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Shipping Name: CORROSIVE SOLID, N.O.S.

Hazard Class: 8

UN/NA Number: 1759

ADR Number: 88

Packing Group: II

Labels Required: corrosive

Additional Shipping Information:

International Transport Regulations:

IMO: 8

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## Section 15 - REGULATORY INFORMATION

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continued...

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## Section 15 - REGULATORY INFORMATION ...

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### SAFETY

Do not breathe dust.

Avoid contact with eyes.

Wear suitable protective clothing.

To clean the floor and all objects contaminated by this material, use water and detergent.

Take off immediately all contaminated clothing.

In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).

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## Section 16 - OTHER INFORMATION

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NEW ZEALAND POISONS INFORMATION CENTRE

0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

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